CAPE COD
COMMISSION

Cape Cod Metropolitan Planning Organization (MPO)

Unified Planning Work Program for Transportation Planning Activities

(October 1, 2014 – September 30, 2015)

Endorsed– June 23, 2014

CAPE COD METROPOLITAN PLANNING ORGANIZATION

Unified Planning Work Program for Transportation Planning Activities

October 1, 2014 – September 30, 2015

Endorsed: June 23, 2014

Cape Cod Metropolitan Planning Organization Members

Richard Davey, Secretary and Chief Executive Officer, Massachusetts Department of Transportation (MassDOT)
Francis A. DePaola, Administrator, MassDOT Highway Division
Tom Guerino, Chair, Cape Cod Regional Transit Authority
Jack McCormack, Cape Cod Commission
Jessica Rapp Grassetti, President, Barnstable Town Council
William Doherty, Barnstable County Commissioners
Michael Richardson, Mashpee Selectman, for Bourne, Falmouth, Mashpee, and Sandwich
Curtis Sears, Yarmouth Selectman, for Dennis and Yarmouth
Sims McGrath, Orleans Selectman, for Brewster, Chatham, Harwich, and Orleans
Austin Knight, Provincetown Selectman, for Eastham, Provincetown, Truro, and Wellfleet
Jason Steiding, Mashpee Wampanoag Tribal Council

Ex-Officio Members

Joseph Rodricks, P.E., Chairman, Cape Cod Joint Transportation Committee
George Price, National Park Service/Cape Cod National Seashore
Lawrence T. Davis, US Army Corps of Engineers/Cape Cod Canal
Wayne Lamson, Woods Hole, Martha's Vineyard, and Nantucket Steamship Authority
Pamela S. Stephenson, Federal Highway Administration
Mary Beth Mello, Federal Transit Administration

Cape Cod Commission Staff Contact

Glenn Cannon, P.E., Technical Services Director

Cape Cod Metropolitan Planning Organization Endorsement DATE: June 23, 2014

The UPWP development process is being used to satisfy the public hearing requirements of the FTA's Section 5307 program and this public notice of public involvement activities and time established for public review and comments on the UPWP will satisfy the FTA Program of Projects requirements.

This report was funded in part through grants from the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA), United States Department of Transportation (USDOT). The views and opinions of the Cape Cod Metropolitan Planning Organization expressed herein do not necessarily state or reflect those of the United States Department of Transportation.

CAPE COD
COMMISSION

CAPE COD METROPOLITAN PLANNING ORGANIZATION (MPO)
Unified Planning Work Program (UPWP)
October 1, 2014 through September 30, 2015

The signatures to follow certify that the Cape Cod Metropolitan Planning Organization (MPO), at their meeting on June 23, 2014, hereby approves the following action in accordance with the Comprehensive, Cooperative and Continuing transportation planning process. In accordance with the requirements of 23 CFR Part 450 Section 308(c) of Federal Regulations, the MPO for Cape Cod has completed its review and hereby endorses the Cape Cod Unified Planning Work Program for Transportation Planning Activities for October 1, 2014 through September 30, 2015.

Richard Davey, Secretary/Chief Executive Officer – Massachusetts Department of Transportation (MassDOT)

Francis A. DePaola, Administrator
Massachusetts Department of Transportation (MassDOT) Highway Division

Jack McCormack
Cape Cod Commission

Tom Guerino, Chair
Cape Cod Regional Transit Authority
authorized Alternate

William Doherty
Barnstable County Commissioners

Jessica Rapp Grassetti, President
Barnstable Town Council

Michael Richardson
Bourne, Falmouth, Mashpee, Sandwich

Curtis Sears
Dennis, Yarmouth

Sims McGrath
Brewster, Chatham, Harwich, Orleans
Authorized alternate

Jason Steiding
Mashpee Wampanoag Tribal Council

Austin Knight
Eastham, Provincetown, Truro, Wellfleet

CAPE COD JOINT TRANSPORTATION COMMITTEE (CCJTC) MEMBERS

Roger Parsons	Barnstable
George Sala	Bourne
Robert Bersin, PE	Brewster
Paul Lagg	Chatham
Joseph Rodricks, PE	Dennis
Neil Andres	Eastham
Marlene McCollem	Falmouth
Lincoln Hooper	Harwich
Catherine Laurent	Mashpee
Mark Budnick	Orleans
David Gardner	Provincetown
Paul S. Tilton, PE	Sandwich
Charleen Greenhalgh	Truro
Mark Vincent	Wellfleet
George R. Allaire, PE	Yarmouth
Dr. Edward Gross	Bicycle Representative

CCJTC EX-OFFICIO MEMBERS

Tom Cahir	Cape Cod Regional Transit Authority
Pamela S. Stephenson	Federal Highway Administration
Mary Beth Mello	Federal Transit Administration
Bryan Pounds	Massachusetts Department of Transportation
Tim Kochan	MassDOT, Highway Division, District 5
Edward DeWitt	Association to Preserve Cape Cod

CAPE COD COMMISSION

Table of Contents

Introduction

CAPE COD COMMISSION

This Unified Planning Work Program (UPWP) is developed annually by the Cape Cod Commission transportation staff on behalf of the Cape Cod Metropolitan Planning Organization, in accordance with the requirements in SAFETEA-LU and federal planning regulations including the newest federal transportation legislation "Moving Ahead for Progress in the 21st Century" (MAP-21). MAP-21 makes several changes such as the elimination of discretional programs, emphasis on performance measures, and Performance Management in general. Another new feature is the introduction of the "Transportation Alternatives Program" (TAP) that encourages enhancements such as multi-use paths and safe routes to schools.

The UPWP describes all significant transportation planning activities planned on Cape Cod over the twelve (12) month period, regardless of lead organization and funding source. The following are the major transportation planning areas:

1. Management and Support of the Planning Process and Certification Activities – the efforts required for coordinating transportation planning activities between CCC and Metropolitan Planning Organization (MPO) member communities, local, regional, state and federal agencies; efforts required to maintain the public participation process; Environmental Justice strategies; efforts required for the administration of the CCC contract with the Massachusetts Department of Transportation (MassDOT); development and approval of the UPWP and the Transportation Improvement Program (TIP); and enhancement of the technical capacity of the planning process.

2. Data Collection and Analysis Activities – to continually gather and update traffic, crash, and road data necessary for transportation planning and analysis; to maintain databases; to develop and update Cape Cod's travel demand forecasting model; to review safety data, goals, objectives, and strategies to promote safety.

CAPE COD COMMISSION

3. Short- and Long-Range Transportation Planning – efforts to update and maintain the Regional Transportation Plan for Cape Cod, a certification activity that requires a new plan every four years and development of the Congestion Management Program for the region. Also includes efforts to perform special planning studies of corridor safety/traffic flow and transit and integration of special studies into the regional transportation plan. Emphasis areas include identification of strategies to support the economic vitality of the metropolitan area, transportation security, emergency planning, strategies to promote smart growth and economic development patterns, environmental protection and energy conservation and preservation of the existing transportation system.

4. Other Technical Activities – to provide other technical assistance to the region, including assistance in the design and implementation of projects, participating in special studies, coordination with transit agencies and assistance in the planning, design, and development of the Intelligent Transportation System for Cape Cod. Special emphasis areas include enhancing the integration and connectivity of the transportation system, across and between modes, for people and freight and promotion of Operation and Management Strategies.

5. Regulatory Review and Planning Assistance to the Towns – review of Developments of Regional Impact and assistance in the development and implementation of Local Comprehensive Plans and Districts of Critical Planning Concern.

Appendix – efforts that are awaiting grant funding that may be initiated during the UPWP period, including efforts proposed by the National Park Service.

COORDINATION WITH FEDERAL TRANSPORTATION PLANNING FACTORS

All tasks of the UPWP will be implemented with consideration of federal transportation planning factors. This discussion relates to the general topic of Cape Cod MPO transportation planning and is intended to

provide an overview to the public. Each planning factor may apply to a varying degree to each specific UPWP task. Cape Cod MPO transportation planning goals are manifested in the Cape Cod Regional Transportation Plan (RTP) referenced in the discussion below. The UPWP is developed in coordination with the eight MAP-21 planning factors as follows:

1. SUPPORT THE ECONOMIC VITALITY OF THE METROPOLITAN AREA, ESPECIALLY BY ENABLING GLOBAL COMPETITIVENESS, PRODUCTIVITY, AND EFFICIENCY

The Cape Cod MPO staff shall apply specific criteria in the review of transportation strategies. These criteria are applied to changes of delay and emissions. Reduction in traffic delay has a direct consequence on economic vitality both through the timely arrival of commuters and goods and reduction in fuel expenses and losses due to air pollution. The RTP directly supports these efforts through the goal: "Create a transportation system that reinforces local development, land use, economic, cultural, and historic preservation goals." The CCC directly supports regional productivity through its economic development mission (including full-time staff) manifested in the Regional Policy Plan and support of the Cape Cod Economic Development Council's initiatives, including support of the federally approved Cape Cod Comprehensive Economic Development Strategy priority projects.

2. INCREASE THE SAFETY OF THE TRANSPORTATION SYSTEM FOR MOTORIZED AND NONMOTORIZED USERS

The Cape Cod MPO staff shall apply specific criteria in the review of transportation strategies. These criteria are applied to estimated changes in safety. The primary goal of the RTP is focused on safety and security: "Create a transportation system that provides safe travel options for people and freight, and protects users from natural and external threats." Safety is of such importance that it is recognized in its own chapter of the RTP.

3. INCREASE THE SECURITY OF THE TRANSPORTATION SYSTEM FOR MOTORIZED AND NONMOTORIZED USERS

The primary goal of the RTP is focused on safety and security: "Create a transportation system that provides safe travel options for people and freight, and protects users from natural and external threats." Security is of such importance that it is recognized in its own chapter of the RTP. One area of additional security planning that applies to Cape Cod is that of traffic impacts due to weather events such as impending hurricanes. CCC staff is continuing to participate in the Massachusetts Emergency Management Agency (MEMA) Massachusetts State Police efforts regarding the "Cape Cod Emergency Traffic Plan."

4. INCREASE THE ACCESSIBILITY AND MOBILITY OF PEOPLE AND FOR FREIGHT

The Cape Cod MPO staff shall apply specific criteria in the review of transportation strategies. These criteria are applied to improvements in multimodal accessibility. The RTP supports these efforts through its goal: "Connect village centers, economic and employment centers, and points of interest using multiple coordinated modes of transportation in a direct and efficient manner so that people and goods can get from where they are to where they are meant to go."

5. PROTECT AND ENHANCE THE ENVIRONMENT, PROMOTE ENERGY CONSERVATION, IMPROVE THE QUALITY OF LIFE, AND PROMOTE CONSISTENCY BETWEEN TRANSPORTATION IMPROVEMENTS AND STATE AND LOCAL PLANNED GROWTH AND ECONOMIC DEVELOPMENT PATTERNS

The RTP supports this planning factor through three goals: "Create a transportation system that maintains, protects, and enhances the natural environment of Cape Cod"; "Create a transportation system that reinforces local development, land use, economic, cultural, and historic preservation goals"; and "Base projects and programs on an objective, transparent and inclusive decision-making process in cooperation with federal, state, regional, and local transportation agencies, government officials, businesses and citizens." The RTP and therefore the UPWP includes a focus on addressing Climate Change. Where appropriate, UPWP tasks will include assessments of vulnerabilities and negative risks

that climate change effects or extreme weather events pose, to the Cape's transportation infrastructure. These vulnerabilities and risks will be seriously considered when planning future improvements. Where appropriate, UPWP tasks will develop adaptation strategies that will enable the Cape Cod region to implement improvements appropriately. The reduction of greenhouse gas emissions (GHG) remains and important goal in addressing climate change. UPWP tasks are encouraged that reduce VMT and congestion.

6. ENHANCE THE INTEGRATION AND CONNECTIVITY OF THE TRANSPORTATION SYSTEM, ACROSS AND BETWEEN MODES, FOR PEOPLE AND FREIGHT

The Cape Cod MPO staff shall apply specific criteria in the review of transportation strategies. These criteria are applied to improvements in multimodal accessibility. The RTP supports these efforts through its goal: "Connect village centers, economic and employment centers, and points of interest using multiple coordinated modes of transportation in a direct and efficient manner so that people and goods can get from where they are to where they are meant to go." Where appropriate, UPWP tasks will support the enhancement of the movement of goods throughout the Cape Cod region. To further this goal, Cape Cod MPO staff will continue to develop knowledge and skills regarding the integration of goods movement and seek to meet with stakeholders representing the freight shipping community.

7. PROMOTE EFFICIENT SYSTEM MANAGEMENT AND OPERATION

The RTP supports this planning factor through three goals: "Optimize travel time throughout the transportation system for people and freight by pursuing strategies to reduce congestion in areas where it exists and taking proactive measures to prevent congestion in currently free flowing areas"; "Preserve, maintain, and modernize the existing transportation system"; and "Base projects and programs on an objective, transparent and inclusive decision-making process in cooperation with federal, state, regional, and local transportation agencies, government officials, businesses and citizens."

8. EMPHASIZE THE PRESERVATION OF THE EXISTING TRANSPORTATION SYSTEM

The RTP supports this planning factor through two goals: "Optimize travel time throughout the transportation system for people and freight by pursuing strategies to reduce congestion in areas where it exists and taking proactive measures to prevent congestion in currently free flowing areas" and "Preserve, maintain, and modernize the existing transportation system." Through the CCC regulatory process, development projects are required to provide traffic mitigation. Additionally, a significant number of acres of developable land have been conserved through the CCC regulatory process — thereby reducing future transportation impacts.

STAFF DEVELOPMENT

Throughout the year staff will be provided with opportunities for professional development in support of the various UPWP tasks. For example, to attend a workshop that focuses on reducing crashes at hazardous intersections the workshop fee and staff time will be billed to the UPWP task related to safety (e.g., Task 3.2).

Task #1 – Management and Support of the Planning Process and Certification Activities

TASK 1.1 - UNIFIED PLANNING WORK PROGRAM (CERTIFICATION ACTIVITY)

Objectives: To develop a Unified Planning Work Program (UPWP), in accordance with the requirements in MAP-21 and federal planning regulations, and to obtain MPO endorsement of the UPWP. To prepare progress reports, as needed.

Previous Work: Previous UPWPs (most recent MPO-endorsed UPWP: June 2014)

Procedures: In conformance with applicable Federal and State guidelines, prepare a UPWP which describes all significant transportation and transportation-related planning activities anticipated to be carried out in the region during the period, regardless of funding sources or lead organization. Maintain the UPWP and make amendments as necessary.

Products: Unified Planning Work Program for Transportation Planning Activities for the period October 1, 2014 to September 30, 2015. Amendments to the current UPWP will be submitted as necessary. Monthly progress reports on PL activities performed under the UPWP and an annual report of transportation planning activities.

Schedule:

- Draft UPWP anticipated submission to MPO and CCJTC, May 2015
- Final UPWP anticipated submission to MPO, June 2015
- Monthly progress reports
- Annual Report

CAPE COD COMMISSION

Funding/Staffing breakdown:

Funding Source	Amount	CCC Staffing
FHWA/MassDOT	$13,750	4.5 person-weeks

TASK 1.2 - TRANSPORTATION IMPROVEMENT PROGRAM (CERTIFICATION ACTIVITY)

Objectives: To prepare a program of transportation improvement projects that is consistent with MAP-21, the region's transportation plan, the State Implementation Plan, EPA's Air Quality Conformity Regulations, and FHWA/FTA's Planning Regulations. The Transportation Improvement Program (TIP) will include a four-year program of projects. The TIP will be presented for endorsement by the Metropolitan Planning Organization (MPO) in accordance with federal regulations and the region's Public Participation Plan.

Previous Work: "Cape Cod Transportation Improvement Programs (TIPs)," and amendments as needed, 1988 to present; latest endorsed TIP (June 2013) document covers the period of federal fiscal years 2014 – 2017.

Procedures: To continue to participate in a committee of Regional Planning Agency (RPA) Directors, Federal and State officials to cooperatively develop financial estimates, evaluate projects, and schedule of TIP development.

I – Preparation of the draft TIP

A) General

1. The TIP is a staged, multi-year, intermodal program of transportation projects which are consistent with the Regional Transportation Plan (RTP). It is the programming document to implement FHWA and Federal Transit Administration (FTA) Regional Transportation Plan projects.

2. Insure involvement of local officials and citizens through the Cape Cod Joint Transportation Committee and the Public Participation Plan

3. Provide assistance to municipalities in advancing TIP projects

4. Coordinate with MassDOT District 5, and the MassDOT Boston Office of Transportation Planning in developing project advancement

5. Include project within financial estimates (and other items)

B) Development of the four-year program of projects according to a uniform statewide format.

1. Update the list of transit and highway projects that are expected to require federal transportation funds during the active fiscal years of the TIP.

2. The list of projects may include information such as the following:

a. The official MassDOT identifying project title
b. Project description
c. Estimated total cost
d. Proposed sources of federal and non-federal funds.

3. The total costs of projects seeking federal funds in each program year shall be in line with anticipated federal and state funds.

C) Public Participation

- Per the MPO approved Public Participation Plan.

CAPE COD COMMISSION

II – TIP Approval

The TIP documents will be reviewed and endorsed by the MPO. The endorsed products will serve as a portion of the required air quality consistency documentation necessary for USDOT (FHWA/FTA) and EPA conformity determinations.

III – Modification/Amendment

A) Amendments to the TIP require MPO approval.

IV – Publication of Obligated Projects

A) Description and costs of obligated TIP projects by program year

B) Listing published within TIP, includes projects obligated within the period up to 90 days following the closing of the fiscal year in which the projects were obligated.

Products:

- TIP consistent with the State Implementation Plan and the Regional Transportation Plan
- Modifications/amendments to the TIP as required

Schedule: As determined by the MPO, FHWA, FTA, and MassDOT.

Funding/Staffing breakdown:

Funding source	Amount	CCC Staffing
FHWA/MassDOT	$30,000	9.5 person-weeks

TASK 1.3 - CCJTC AND MPO ACTIVITIES/PUBLIC PARTICIPATION PROGRAM

CAPE COD COMMISSION

Objectives: To maintain an open comprehensive, cooperative and continuing (3C) transportation planning and programming process involving the local, regional, state, and federal levels of government in conformance with applicable federal and state requirements and guidelines.

Previous Work:

- Past maintenance of 3C process, including support to the CCJTC, the MPO, and member agencies
- Update of the Public Participation Plan (PPP) (June 2007, Addendum in 2009). Update underway for FY 2014.

Procedures:

1. Provide administrative and technical support to the 3C regional planning process, such as:

    a. Community liaison and assistance on transportation planning matters
    b. Review of federal and state transportation programs and related documents as required

2. Provide for and support the public participation process in transportation planning for Cape Cod

    a. Support Cape Cod Joint Transportation Committee (CCJTC)
    b. Develop, support and participate in local parking, traffic, bikeway, and environmental committee meetings
    c. Preliminary and follow-up work for meetings as required

3. Present transportation plans and programs (e.g., UPWP, Regional Transportation Plan, and TIP) developed through the public participation process to the Cape Cod Joint Transportation

Committee and the Metropolitan Planning Organization (MPO) for appropriate action

4. Conduct efforts in conformance with federal, state and local requirements

Products:

- Viable 3C process, including CCJTC and public participation program
- Revision of PPP, as necessary
- Website updates, notices to news media, meeting notices
- Transportation program annual report
- Minutes and reports on CCJTC meetings
- Letters, memoranda, and notes as required
- Other products as required

Schedule: Meetings typically held monthly

Funding/Staffing breakdown:

Funding Source	Amount	CCC Staffing
FHWA/MassDOT	$46,250	15 person-weeks

TASK 1.4 – ENVIRONMENTAL JUSTICE/TITLE VI

Objectives: To ensure that all segments of the population are able to fully participate in transportation planning processes and has access to transportation facilities. To integrate the basic principles of Environmental Justice into the 3C Transportation Planning Process, including Limited English Proficiency, as necessary. To develop and maintain a Title VI Civil Rights program for the Cape Cod MPO. To cooperate with stakeholders in the development of the Public Transit Human Services Transportation Plan. To engage the Mashpee Wampanoag Tribe in transportation planning. To account for Environmental Justice efforts within each task as appropriate.

Previous Work:

- Attendance at preliminary meetings with MassDOT and FHWA to discuss environmental justice requirements and receive guidance on ensuring compliance.
- Preparation of updates to the Cape Cod Regional Transportation Plan including information and strategies to ensure Environmental Justice.
- 2014 Title VI Report and Public Participation Plan (pending)

Procedures: Coordination with the Cape Cod Regional Transit Authority and MassDOT, as required.

Products:

- Viable Title VI Civil Rights program for the Cape Cod MPO
- Incorporation of environmental justice principles into MPO activities

Schedule: Ongoing procedures

Funding/Staffing breakdown:

Funding Source	Amount	CCC Staffing
FHWA/MassDOT	$37,500	12 person-weeks

CAPE COD
COMMISSION

TASK 1.5 – REGIONAL TRANSPORTATION PLAN

(Certification Activity)

Objectives:

To update the Regional Transportation Plan for Cape Cod providing greater integration of land use, transportation, and climate change data, in conformance with the federal transportation legislation: Moving Ahead for Progress in the 21st Century (MAP-21), and consistent with the goals and requirements of the Cape Cod Commission, towns, the MassDOT, FTA, and the FHWA. Consider all modes of transportation and both short- and long-range elements. Expand public accessibility to RTP effort in accordance with the Commission's Title VI program.

Previous Work:

- Regional Policy Plan for Cape Cod, 2009
- Regional Transportation Plan, approved by MPO, August 2011
- Interagency Scenario Planning Pilot Project, 2011
- Living Streets Design Manual for Cape Cod, 2013
- UPWP FFY14 Climate Change Risk and Vulnerability Assessment of Transportation Infrastructure, November 2013
- UPWP FFY15 Climate Change Mitigation & Adaptation Strategy for Critical Transportation Infrastructure, under development 2014
- INVEST sustainable highways self-evaluation tool, 2014
- 2014 Title VI Report and Public Participation Plan (pending)
- 2014 GIS-based Infrastructure Vulnerability Tool (pending)
- 2014 Freight Study (pending)
- 2014 "Section 208 Area-Wide Water Quality Management Plan for Cape Cod"

Procedures:

Undertake four-year update to the Regional Transportation Plan (RTP). Incorporate findings of the Scenario Planning Pilot Project to support the Livability, Sustainability, and Climate Change goals of U.S. DOT by integrating regional-scale climate change data and future development scenarios into Plan analysis and recommendations. Integrate findings from INVEST sustainable highways self-evaluation tool. Incorporate FHWA's eight-step framework in developing the Congestion Management chapter. Clearly link financial constraint to development of alternatives. Provide links to other key documents as noted above.

Work closely with MassDOT's Environmental Services section to ensure that any proposed projects have support and approval of MPO. Continue to develop partnerships and conduct outreach with community groups and the Mashpee Wampanoag Tribe. Ensure RTP is consistent with protection of natural and historic resources.

Continue to work with communities to identify Growth Incentive Zones and areas for higher Development of Regional Impact (DRI) thresholds designated through Chapter H of the Commission's regulations to promote research and development/light manufacturing, and identify appropriate transportation infrastructure to support these areas.

Strengthen procedures to incorporate stormwater and nutrient management from transportation rights-of-way.

Develop freight-specific section of the RTP (freight information in current RTP is distributed among issue areas).

Develop goals, objectives and strategies to advance healthy transportation options.

Integrate Performance Standards (see also Task 2.2) into the RTP.

Products:

- Draft and Final 2016 Regional Transportation Plan
- Interim updates and amendments as necessary
- Presentation materials, maps, website downloads for meetings and workshops
- Public engagement tools (see also Task 3.4)

Schedule: Ongoing, completed fall 2015

Funding/Staffing Breakdown:

Funding Source	Amount	CCC Staffing
FHWA/MassDOT	$ 61,250	20 person-weeks

CAPE COD COMMISSION

Task #2 – Data Collection and Analysis Activities

TASK 2.1 – CAPE COD TRAFFIC DATA COLLECTION PROGRAM

Objectives: To create and maintain databases of traffic counting data for Cape Cod to be used for transportation planning. To monitor growth in traffic volumes and to determine existing traffic volumes on Cape Cod roads. To perform the coverage counts for MassDOT. To perform bicycle and pedestrian activity counts in selected locations. To obtain data on road geometry, when necessary, as part of the traffic counting efforts.

Note: It is a goal of the region to install permanent traffic counters to provide continuous reliable data on traffic volumes, vehicle types, and speed on all major roads. Permanent stations with remote access capabilities are the appropriate safe and cost-effective manner to collect data.

Previous Work: Annual traffic counting programs, 1984–2013. Traffic counting reports and appendices (2013 versions most recently):

- Cape Cod Traffic Counting Report
- Intersection Turning Movement Counts
- Bicycle - Pedestrian Counts
- Park and Ride Lot Counts
- Travel Times

Procedures: For the summer of 2015, over 250 counts will be scheduled across Cape Cod's 15 towns. Additional counts, in coordination with or at the request of the towns and MassDOT, will be taken as schedule and weather permits. Where possible, FHWA traffic monitoring guide procedures will be followed. Police details, if required for the additional count locations, shall be the responsibility of the towns for local roads and MassDOT for state roads and locations requested by MassDOT. Turning movement counts will also be taken at selected intersections. Bicycle and

pedestrian counts will also be performed on selected paths throughout Cape Cod.

Where possible, FHWA traffic monitoring guide procedures will be followed. Work activities under this task include:

- Placement of counters
- Retrieval of counters
- Routine checks of counters
- Equipment inventory and maintenance
- Data tabulation
- Data factoring
- Data analysis/recording
- Coordination of counters
- Coordination of safety measures with towns
- Coordination of external program counts
- Periodic calibration/verification of equipment per MassDOT guidelines
- Obtain necessary permits from towns and MassDOT
- Development of traffic count file and data base
- Data mapping
- Program evaluation
- Computer data entry and maintenance
- Updated geometric information, as needed. Gather information to include sidewalks, shoulders and bicycle lanes.

Products:

- Cape Cod Traffic Counting Report for 2014. Report will contain information on study design, count location, date/time of peak-hour volume, average daily traffic, and factored average daily traffic. The most recent 10 years of counts conducted by CCC will be included in this report.
- Online database that includes date of counts, general weather and traffic conditions average daily traffic, factored average daily traffic, peak hour traffic volume. Breakdown of traffic by hour over period studied kept on file. Information provided via a map-based search tool for ease of use by the public and other stakeholders.

- Factored counts for MassDOT
- Expanded seasonal traffic counting data
- Turning movement counts at intersections, including bicycle and pedestrian counts
- An analysis of traffic growth trends over the past 10-year period for Cape Cod, subregions and major routes
- Counts accessible at website:
  http://www.capecodcommission.org/counts

Schedule: Report on counts taken in 2011 submitted January 2012

Funding/Staffing breakdown:

Funding Source	Amount	CCC Staffing
FHWA/MassDOT	$40,000	13 person-weeks

TASK 2.2 – PERFORMANCE STANDARDS

A key feature of MAP-21 is the establishment of a performance- and outcome-based program with the objective to invest resources in projects that collectively will make progress toward the achievement of the national goals. These national performance goals from MAP-21 are identified in the following table:

Goal area	**National goal**
Safety	To achieve a significant reduction in traffic fatalities and serious injuries on all public roads
Infrastructure condition	To maintain the highway infrastructure asset system in a state of good repair

Congestion reduction	To achieve a significant reduction in congestion on the National Highway System
System reliability	To improve the efficiency of the surface transportation system
Freight movement and economic vitality	To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development
Environmental sustainability	To enhance the performance of the transportation system while protecting and enhancing the natural environment, including mitigation strategies for stormwater management and nutrient loading.
Reduced project delivery delays	To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices

Objectives: To develop standards to be used in assessing the performance of important elements of the Cape's transportation system. To work with MassDOT to support the above MAP-21 goals at the state level. To integrate Performance Standards into the RTP, Regional Policy Plan (RPP) update and Cape Cod Commission's "OGSM" (Objectives, Goals, Strategies and Measures) initiative.

CAPE COD COMMISSION

Previous Work:

- 2014 "Section 208 Area-Wide Water Quality Management Plan for Cape Cod"
- Development of transportation databases for travel times, vehicle counts, crash records
- Geo-located Cape Cod crash database for 2004–2011
- Online mapping of traffic counting data
- Transportation model, developed in 1999/2000 for base year of 1997
- Transportation model, updated in 2010

Procedures:

Identify major elements of the Cape's transportation system. Examples include:

- Major roadway segments based on roadway functional class, including the Mid-Cape Highway (Route 6).
- Intersections of major roads/signalized intersections
- MassDOT Park-and-Ride Lots
- Intermodal connector facilities

For each element identify potential performance standard. For example, for signalized intersections the performance standard may correspond to a certain level of service or operational parameter such as the average number of seconds of delay per vehicle.

Potential performance standards will be presented to the Cape Cod Joint Transportation Committee for consultation and consensus in anticipation of making recommendations to the Cape Cod Metropolitan Planning Organization. Resulting performance standards will be integrated into the Regional Transportation Plan (see also Task 1.5), the Commission's Regional Policy Plan, and Objectives, Strategies, Goals and Measures initiative.

Products:

- Summary report of Cape Cod transportation performance standards

Schedule: Ongoing

Funding/Staffing breakdown:

Funding Source	Amount	CCC staffing
FHWA/MassDOT	$21,250	7 person-weeks

TASK 2.3 – TRANSPORTATION DATABASE MANAGEMENT/MODELING/TRAVEL DEMAND FORECASTING

Objectives: To maintain and improve databases of Cape Cod transportation information including roadway geometry, traffic volumes (motor vehicles, bicycles, pedestrian), and other. To provide transportation information for Cape Cod to local and state officials, transportation professionals, and the public. To continue to develop and calibrate computerized travel demand forecasting databases and models for Cape Cod, including year 2040 forecasts. To continue integration with Geographic Information System (GIS) data to provide a platform for GIS-based traffic counts, congested link summaries, and accident summaries.

Previous Work:

- Draft VISSIM models for Harwich Center and Yarmouth Road/Willow Street (Barnstable)
- Geo-located Cape Cod crash database for 2004–2011
- Online mapping of traffic counting data
- Transportation model, developed in 1999/2000 for base year of 1997
- Transportation model, updated in 2010

CAPE COD
COMMISSION

Procedures: Integrate new records when available; maintain database, develop subroutines for analysis. When details are needed for specific locations, town crash records may be obtained and reviewed. CCC staff will contact MassDOT to request latest crash records. Conduct public outreach to member communities. Respond to data and information requests from the public, transportation professionals, and local, regional, and state officials. Participate in analyses of and obtain latest Pictometry data and software.

Review and utilize available socio-economic, employment, population, and housing data for base year and forecast year data. Utilize existing traffic volume and transit data to determine existing travel demands. Utilize existing transportation models for sub-regions of Cape Cod. Improve transfer methods of data between CCC Geographic Information System (GIS) services and transportation modeling effort. Expand transportation demand model to include Saturday morning element and to explicitly include alternate modes. Additional modeling efforts include the use of Synchro/Sim-Traffic software. Construction of Synchro models includes development of a computerized roadway/intersection network. Inputs include turning movements and roadway link traffic volumes, roadway and intersection geometry, and signal timing and phasing.

Products:

- Crash, roadway geometry, roadway traffic volumes, intersection turning movements data, and Pictometry information database
- Reports, letters, and memoranda as required
- Updated regional transportation model based on latest available demographic information, reports of results, and summaries
- Models will be used to support Task 3 and other regional planning and TIP activities

Schedule: Ongoing

Funding/Staffing breakdown:

Funding Source	Amount	CCC staffing
FHWA/MassDOT	$42,500	13.5 person-weeks

TASK 2.4 – PAVEMENT MANAGEMENT/ ASSET MANAGEMENT

CAPE COD COMMISSION

Objectives:

To collect data and implement a regional pavement management system for Cape Cod to provide an objective rating of pavement conditions and needs. To collect other roadway attribute data as part of the pavement management system.

Previous Work:

- Pavement Management Status Reports (2011, 2012, and 2013). 2013 data collection includes approximately 200 "point" assessments collected during installation of automatic traffic recorder installation – outputs include updated databases and mapping. Corridor-based pavement assessments (windshield surveys) for 33% of the municipally-owned federal-aid roadway network – outputs include updated databases and mapping.
- FY 2013 review of town-based pavement management efforts.
- Eastham, Pilot Pavement Management Study, December 1990
- Bourne, Preliminary Pavement Management Report, April 1992
- Participation on technical coordination committees for Pavement Management
- Special Statewide pavement management systems effort, 1994

Procedures:

Existing conditions determination will be conducted through "windshield" surveys of roadways. Approximately 33% of the municipally-owned federal-aid eligible roadways will be surveyed and results will be used to update databases and produce pavement condition maps and reports. Approximately 200 point assessments of pavement condition will be made as part of the installation of automatic traffic recorders – results inputted into a database and used to generate maps and reports. Additional information may be provided by individual towns; some towns maintain pavement management databases. Existing

CAPE COD COMMISSION

data will be requested from individual towns. The proposed pavement rating system will be determined in coordination with the towns. The rating system will be consistent with MassDOT standards and standards that other Massachusetts' RPAs are using.

In addition, a focus on tribal roads under the jurisdiction of the Mashpee Wampanoag tribe will be continued.

During the collection of pavement condition, technicians will record important roadway characteristics such as the availability and serviceability of sidewalks for either side of the roadway.

Products:

Assessment of pavement management needs and inventory of other roadway attributes such as sidewalk availability and serviceability.

Schedule:

January-March 2015	Evaluation of existing data, coordination with communities, review of methodologies.
March-April 2015	Schedule & coordination of data collection
May-August 2015	Data Collection
September 2015	Status Report

Funding/Staffing breakdown:

Funding Source	Amount	CCC Staffing
FHWA/MassDOT	$ 43,750	14 person-weeks

TASK 2.5 – GEOGRAPHIC INFORMATION SYSTEM

Objectives:

To maintain and improve the Geographic Information System for Cape Cod to provide an analysis tool for transportation decision-making.

Ongoing Work:

- Integration of Massachusetts DOT Roadway Inventory Files
- Development of geographic land use information for transportation planning

Procedures:

Importing of transportation-related geographic information from state, federal, local and other sources into Cape Cod's Geographic Information System; editing as needed; provide database, digital, and graphic outputs of geographic information as required.

Products:

Digital files for input into specialized transportation analyses; graphic output of maps (paper, .jpg, .pdf as required).

Schedule: Ongoing

Funding/Staffing breakdown:

Funding Source	Amount	CCC Staffing
FHWA/MassDOT	$ 31,485	10 person-weeks

CAPE COD COMMISSION

TASK 2.6 – ADA TRANSITION PLAN

Objectives:

Conduct an ADA (Americans with Disabilities Act) self-evaluation of the Cape Cod Commission office and exterior public area and prepare a comprehensive report that outlines the barriers persons with disabilities may encounter as they seek to participate in government services and programs provided by the Cape Cod MPO. Based on the findings of the self-evaluation, a Transition Plan will be produced to identify strategies to remove barriers.

Previous Work:

- 2014 Public Participation Plan (pending)

Procedures:

- Coordination with ODCR on ADA issues
- Conduct ADA self-evaluation of facilities
- Prepare ADA Transition Plan

Products:

- Documentation of barriers and obstacles with persons with disabilities may encounter in the course of seeking services or participation in Commission programs.
- ADA Transition Plan

Schedule: Ongoing

Funding/Staffing breakdown:

Funding Source	Amount	CCC Staffing
FHWA/MassDOT	$ 7,500	2.5 person-weeks

CAPE COD
COMMISSION

Task #3 – Short- and Long-range Transportation Planning

Livability Statement

Livability refers to the social and environmental quality of an area as perceived by residents, workers, and visitors. The U.S. Department of Transportation considers the principle of Livability to be essential to the success of regional transportation planning. Livability directly benefits people who live in, work in or visit Cape Cod, increases property values and business activity, and it can improve public health and safety. Livability is largely affected by conditions in our public spaces, places where people naturally interact with each other and their community, including roads, conservation lands, transportation hubs and other public facilities, and so is affected by public policy and planning decisions.

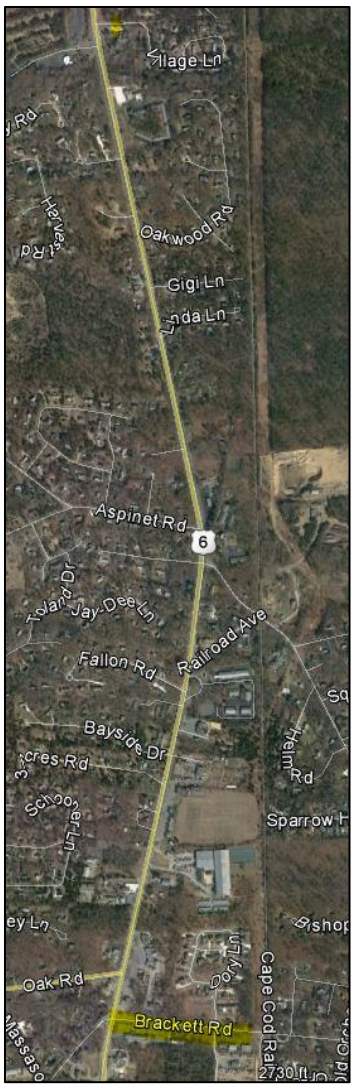
Transportation decisions can have a major impact on Livability. Streetscapes that are attractive, safe and suitable for a variety of transportation modes (particularly walking) are a key factor in Livability. Traffic safety, traffic noise and local air pollution, affordability, impervious surface coverage (i.e., the portion of land devoted to roads and parking), preservation of environmental and cultural structures, and opportunities for recreation are all Livability factors often affected by transportation policies and practices. Transportation decisions can also affect social interactions and community cohesion. Pedestrian-friendly streets create opportunities for people to meet and interact, helping to create community networks. The MPO continues to support Livability through the following planning tasks in this UPWP.

CAPE COD COMMISSION

TASK 3.1 – LIVING STREETS (ROUTE 6 EASTHAM-SOUTH WELLFLEET)

Objective: To conduct a transportation planning study for the Route 6 corridor between Brackett Road in Eastham and Village Lane in South Wellfleet (located approximately one-tenth of a mile north of the Eastham/Wellfleet town line) with the following study goal:

> Develop alternatives that will provide safe and convenient access within the study area for all users of the roadway system including pedestrians, bicyclists, and motorists.



Additional locations will be included as appropriate. These may include locations being considered for Congestion Mitigation Air Quality funding or have been identified through the Cape Cod Commission's public participation process.

Data Collection – Traffic Forecasting: A key task of the study will be the collection of needed data. Data collection will include adjustment of existing traffic counting data if available or new traffic counts collected at the following locations:

Automatic Traffic Recorder (ATR) counts:

- Route 6:
  - North and south of Brackett Road
  - North and south of Nauset Road (north end)
  - North and south of Wellfleet Drive-in driveway

Turning Movement Counts (TMCs):

- Route 6 at:
  - Brackett Road
  - Old County Road
  - Oak Road
  - Nauset Road
  - Aspinet Road
  - Wellfleet Drive-in driveway (where lane reduction occurs)

Study area for the project as shown in photo is Route 6 corridor from Brackett Road in Eastham to village lane in South Wellfleet, located opposite the Wellfleet drive-in, where route 6 narrows from four lanes to two lanes.

Data collection at other congested locations as appropriate.

Public Participation: The Cape Cod Commission will facilitate a kick-off meeting with stakeholders and interested public. Stakeholders will engage to facilitate project direction, development of alternatives and the preferred alternative to improve this section of Route 6 in Eastham and South Wellfleet. The project team will hold public meetings to provide information and obtain stakeholder input. Most public meetings will be held in the town of Eastham, with at least one in Wellfleet. In addition, the following methods may be used to communicate study progress and receive public input:

- Questionnaires/online surveys
- Informational handouts/flyers
- Online postings at:

www.capecodcommission.org/departments/technicalservices/transportation

- Progress updates at monthly meetings of the Cape Cod Joint Transportation Committee and meetings of the Cape Cod Metropolitan Planning Organization.

CAPE COD
COMMISSION

- Presentations at public meetings.
- Promotion of contact information and reception of public input via telephone, fax, email, or regular mail
- Meetings with local officials and other interested parties to discuss other congested locations, as appropriate

Development of alternatives: Based on estimated traffic operations identified for the future forecast year and input received from the public participation process, the Cape Cod Commission will develop and analyze a minimum of three alternatives. One of the alternatives will be the "no-build" scenario and will form the basis of comparison for any of the "build" alternatives. Alternatives development may include preparation of analyses of other congested locations as appropriate.

Evaluation criteria, and recommendations: Each alternative will be evaluated for its impact on traffic flow and safety, as well as environmental and community character impacts. General evaluation criteria that may be applied include:

- INVEST analyses
- Queuing
- Safety impacts (e.g., change in number of conflicting traffic movements & expected traffic demand at each)
- Bicycle and pedestrian accommodation ("living streets")
- Stormwater management
- Right-of-Way impacts (need to acquire property for construction of alternative)
- Expected cost to construct

By reviewing each alternative's potential benefits in concert with its costs and other detriments, a preferred alternative will be identified.

Products: Results will be published in a draft and written report to be made available online at www.capecodcommission.org in addition to printed copies for interested parties. Other study materials will be produced and made available via internet, mailings, public meetings etc. including maps and charts, handouts and flyers.

Reports and memoranda published are to include analyses and recommendations for improvements at other congested locations as appropriate.

Schedule & Level of Effort: The schedule for this effort allows for a final completion by October 2015. Milestones include coordination meetings with the Cape Cod Joint Transportation Committee (or designated subcommittee thereof) and updates to the Cape Cod Metropolitan Planning Organization.

- Needed data collection (FY 2014) – Summer of 2014
- Review/confirmation of scope – November 2014
- Public meeting with Stakeholders: March 2015
- Problem identification and development of alternatives: June 2015
- Analysis of Alternatives – review with CCJTC: July 2015
- Draft report/public meeting: August2015
- Final report: September 2015

Funding/Staffing breakdown:

Funding Source	Amount	CCC Staffing
FHWA/MassDOT	$65,000	21 person-weeks

CAPE COD COMMISSION

TASK 3.2 – TRANSPORTATION SAFETY (ROTARY RETROFIT)

Background

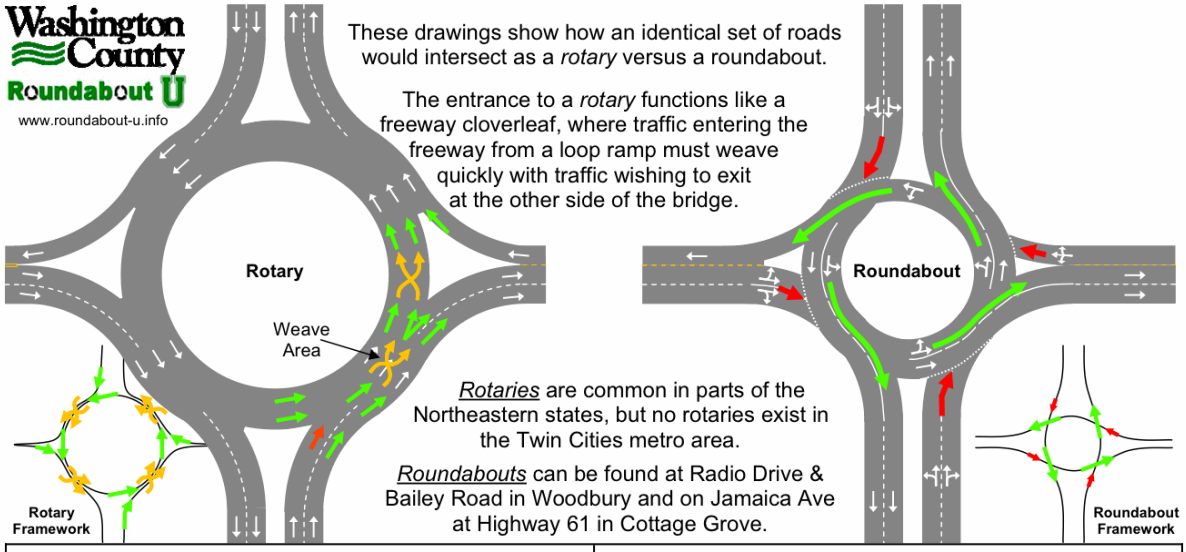
Reviewing crash data for Cape Cod roads it is evident that the rotaries are a major safety hazard for motorists, bicyclists, and pedestrians. While rotaries were used extensively throughout the Northeast in the first half twentieth century, many have been eliminated and replaced by other forms of traffic control in recent decades. It has been well established in professional literature that rotaries, which tend to be large and designed for relativity high entry speeds, are inherently dangerous. Conversely, small, low-speed roundabouts have proven to be one of the safest methods for handling traffic. A more detailed comparison of the differences between roadways and roundabouts is presented in Figure 1.

Roundabout retrofits attempt to achieve some of the safety benefits of roundabouts at locations with existing rotaries. Roundabout retrofits involve installing new lane striping and signage and sometimes minor geometric improvements to make a roundabout function more like a roundabout. An example of a typical retrofit plan prepared for the Bourne Rotary by BETA is shown in Figure 2. Where larger reconstruction is warranted a roundabout retrofit can be a successful interim improvement measure.

Roundabout retrofits are low costs improvements with the potential for both safety and operational benefits. Considering these benefits, a systematic effort to retrofit existing roundabouts across Cape Cod should be a priority for the region. Additionally, systematic improvements to these locations would result in greater driver comprehension as these changes would be consistent throughout the region.

To evaluate safety problems and develop plans to improve safety, additional safety analyses at specific locations will be included as appropriate. These may include locations identified under the Top 50 Crash Location under the 2014UPWP task or locations that have been identified through the Cape Cod Commission's public participation process.

How is a ROTARY Different from a Roundabout?



Rotary	Modern Roundabout
It is typical to enter a rotary alongside traffic that is circulating in the inside lanes, like a freeway cloverleaf loop entrance where the ramp entrance lane continues under or over a bridge to the next exit.	Entering traffic must always yield to ALL traffic in the roundabout, regardless of which lane they are in, just like crossing a one-way road.
No intersections occur in a rotary, only adding and dropping of lanes. The right lane usually does not need to yield, but must find a gap to change lanes. The left entry lane must merge or yield before entering.	A roundabout is a series of "crossing intersections" where traffic entering the roundabout must **yield** the right of way to all traffic from the left.
The circle is usually not striped, though multiple vehicles may travel side by side. Lane changes occur after you have entered the circle.	The circle is striped as a spiral. Never change lanes in a roundabout. Choose your lane before entering, just like at a standard intersection.
Entering drivers who wish to circulate must change lanes while circulating and weave with vehicles trying to exit.	No lane changes occur within a roundabout. Except for vehicles that are turning right, entering a roundabout is a "crossing" movement.
A rotary is typically large, with entry speeds of 40 mph or higher.	A roundabout is generally small; speeds are rarely more than 25 mph.
Rotaries work well at low volumes, but very poorly under heavy traffic conditions. Most were designed in the 1940's or earlier.	Roundabouts are able to handle heavy traffic and are used for efficiency and safety. Roundabouts were developed in the 1960's.
Entry may be controlled by yield signs, merge signs, or no signs at all.	Entry is always controlled by yield signs for maximum efficiency.

FIGURE 1. ROTARY VERSUS ROUNDABOUT COMPARISON

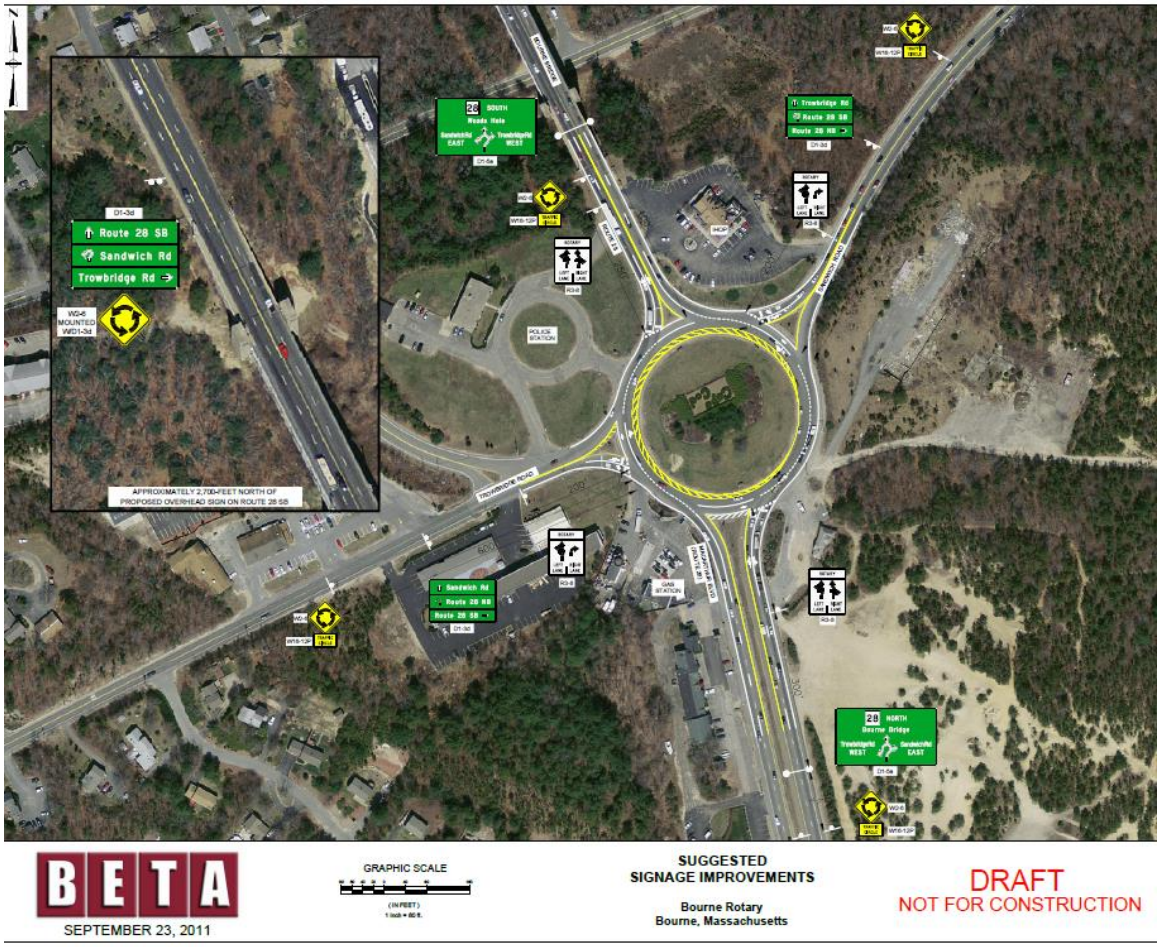


FIGURE 2. SAMPLE ROTARY RETROFIT PLAN

Rotary Data Collection

Identify the existing rotaries on Cape Cod and compile existing geometric, traffic volume, and crash data. Where data gaps exist, collect new geometric, traffic volume, and crash data.

Deliverables

The Final Report will document the following elements of Task 1:

- Map of rotaries on Cape Cod;
- Geometric information on each rotary;
- Summary of traffic volumes at each rotary; and
- Crash total at each rotary.
- Prioritization of improvement locations (e.g., high-crash locations such as the Orleans Rotary) in consultation with the Cape Cod Joint Transportation Committee.

Rotary Analysis

Rotaries identified in Task 1 will be analyzed in terms of operations and safety. Analysis will be summarized for comparison purposes and allow for prioritization in Task 3.

Deliverables

The Final Report will document the following elements of Task 2:

- Crash and operational analysis of rotaries on Cape Cod.

Development of retrofit alternatives

For rotaries identified as priorities based on the analysis from Task 2, roundabout retrofit concepts will be developed. Rough concept level cost estimates will be developed for each concept. As appropriate, multiple concept plans may be developed for a rotary to provide multiple implementation options.

Deliverables

The Final Report will document the following elements of Task 3:

- Roundabout retrofit alternative concept plans;

CAPE COD COMMISSION

- Rough concept level estimates of improvements.

Recommendations

Improvement concepts will be compared and prioritized based on the locations need for improvement, estimated cost of the improvement, and the anticipated benefits and anticipated detriments (if they exist) of the improvement. A plan for implementation will be developed.

Deliverables

The Final Report will document the following elements of Task 4:

- Prioritization of improvements; and
- Implementation plan.

Products

Results will be published in a written report to be made available online at www.capecodcommission.org in addition to printed copies for interested parties.

Schedule & Level of Effort

The schedule for this effort allows for a final completion by September 2015. Milestones include coordination meetings with the Cape Cod Joint Transportation Committee (or designated subcommittee thereof).

- Task 1: Summer 2014 – Winter 2014/2015
- Task 2: Winter 2014/2015 – Spring 2015
- Task 3: Spring 2015 – Summer 2015
- Task 4: Summer 2015 – Fall 2015
- Final Written Report and Presentations: September 2015

Funding/Staffing breakdown:

Funding source	Amount	CCC staffing
FHWA/MassDOT	$37,500	12 person-weeks

TASK 3.3 – FALMOUTH BIKE PLAN

Background

As part of an effort to enhance economic development, the town of Falmouth is seeking to provide safe and effective bicycle facilities between the Shining Sea Bikeway and the several villages of Falmouth and other important destinations, and to provide links to Cape Cod's growing network of designated bicycle routes including the Claire Saltonstall Boston-Cape Cod route and extensions of the Cape Cod Rail Trail and the proposed East Coast Greenway.

The Cape Cod Commission will conduct a bicycle facilities planning study in the Town of Falmouth with the following study goals:

- Identify safe and effective bicycle access between the Shining Sea Bikeway and the villages of Falmouth.
- Identify safe and effective bicycle access between East Falmouth/Waquoit and Falmouth Village.
- Coordinate this planning effort with the Regional Transportation Plan/Cape Cod Bike Plan.

A map of the study area and Falmouth's bikeways is shown on the following page. More detail can be seen by accessing the downloadable .pdf version of the map from the town of Falmouth's website:

http://www.falmouthmass.us/gis/falmouthbikewaysmap.pdf

FIGURE 1 - FALMOUTH BIKEWAYS MAP

Project Initiation

The Cape Cod Commission staff will conduct an initial site visit and kick-off meeting for the project with the Falmouth Bikeways Committee and invited participants.

The Cape Cod Commission staff will gather information regarding any previous bicycle efforts within the study area. The meeting will also be held to record ideas and input. During this meeting the Cape Cod Commission staff will determine stakeholders, agencies, and organizations to contact, to set strategies for working with the community, and to assist in preparing the public involvement portion of the project.

Deliverables

- Electronic copies of meeting notes

Collect and Analyze Existing Data, Plans, and Proposals

The Cape Cod Commission staff will inventory existing Class I, II & III bicycling facilities and analyze these for connectivity within the study area. The inventory and analysis will include the following for each Class of bikeway.

Description of existing facilities and assessment of conditions including:

- Roadway congestion
- Associated parking availability
- Existing Right-of-Way issues
- Pavement and markings conditions
- Degree of existing connectedness

The Cape Cod Commission staff will conduct a document search to identify proposed and planned projects related to the improvement of existing bicycle facilities. This search will include, but not be limited to,

plans prepared by the MassDOT, Cape Cod Commission, and town of Falmouth.

Deliverables

The Draft and Final Reports will document the results of the above data collection, including:

- Inventory of existing bicycle facilities and associated facilities with supporting narrative;
- Maps of existing bicycle facilities and associated facilities;
- Summary of existing plans and related studies.

Alternatives Development

Using the data and analysis generated in previous tasks, the Cape Cod Commission staff will develop alternatives to improve existing conditions in order to achieve the goals of this study outlined above . Alternatives will be developed in sufficient detail to identify major environmental and engineering issues. The Cape Cod Commission staff will complete the following tasks as part of the alternatives development process:

Prioritize potential bicycle connectivity between Woods Hole, the Shining Sea Bikeway and the other villages of Falmouth.

- Identify opportunities for connections to the popular destinations/activity areas;
- Identify partnership opportunities and funding strategies involving partners;
- Estimate cost of alternatives;
- Identify environmental constraints for all alternatives;
- Identify Right-of-Way constraints for all alternatives.

The Cape Cod Commission staff will facilitate a workshop with the Bikeways Committee during alternatives development. The Cape Cod Commission staff will prepare necessary graphics to facilitate the discussion of alternatives, including inventory mapping from previous tasks, and any other display of information needed to understand existing

conditions within the surrounding study area. A meeting summary will be provided by the Cape Cod Commission staff.

Deliverables

Mapping and graphics for the workshop: The Cape Cod Commission staff will provide draft versions for Town review and comment, and one printed set of final meeting displays.

Meeting Summary: The Cape Cod Commission staff will provide draft and final versions in electronic format only.

Public Informational Meeting

The Cape Cod Commission will conduct a public informational meeting. The Town of Falmouth staff will provide meeting materials, including sign-in sheets, and comment forms. Cape Cod Commission staff will provide handouts and displays of alternatives. The Cape Cod Commission staff's representatives at the meetings will include at least two key personnel knowledgeable of the project. The Town of Falmouth will secure the locations, dates, times, and advertising for the meetings. The Cape Cod Commission staff will prepare a meeting summary following the meeting.

Deliverables

Cape Cod Commission staff will provide a draft and final meeting summary of all comments received.

Prepare Bicycle Plan

The Cape Cod Commission staff will compile all pertinent data on existing conditions, alternative development, and alternative analysis to draft and finalize the report. A preferred alternative for each bikeway segment will be presented in the report as well as all viable alternatives. The draft and final report will outline benefits and constraints of each alternative presented.

CAPE COD COMMISSION

Deliverables

Cape Cod Commission staff will provide a draft and a final version of the plan for Town review.

Schedule: October 2014 to September 2015

Funding/Staffing breakdown:

Funding source	Amount	CCC staffing
FHWA/MassDOT	$31,250	10 person-weeks

TASK 3.4 –CLIMATE CHANGE PUBLIC ENGAGEMENT TOOLS

Objective:

To develop public engagement tools to present transportation and climate change information to assist local decision-makers in adopting climate change mitigation and adaptation strategies for critical transportation infrastructure. Encourage public participation by incorporating public engagement tools into the development of 2016 RTP update and Transportation Improvement Program (TIP).

Previous Work:

- UPWP FFY14 Climate Change Mitigation & Adaptation Strategy for Critical Transportation Infrastructure, under development 2014
- UPWP FFY13 Climate Change Risk and Vulnerability Assessment of Transportation Infrastructure, November 2013
- Interagency Scenario Planning Pilot Project, 2011
- Regional Multi-Hazard Mitigation Plan, 2010
- 2014 GIS-based Infrastructure Vulnerability Tool (pending)

Procedures:

CCC staff will develop public engagement tools to facilitate discussion of issues and responses to climate change mitigation and adaptation strategies. CCC Staff will facilitate public workshops during development of the RTP and gather relevant information into a tool to be used in these public workshops.

CCC staff will also provide links to the public engagement tools on the Cape Cod Commission's website and conduct an online questionnaire poll or other online means of gathering public input on Climate Change mitigation and adaptation strategies.

Products: Public engagement climate change mitigation and adaptation tools for transportation infrastructure

Schedule: October 2014 to September 2015

Funding/Staffing breakdown:

Funding Source	Amount	CCC Staffing
FHWA/MassDOT	$31,250	10 person-weeks

TASK 3.5 – BICYCLE/PEDESTRIAN SAFETY PLAN

Objective:

Identify bicycle & pedestrian safety problem areas and develop concepts to reduce severity and frequency of motor vehicle crashes with bicyclists and pedestrians. Develop programs and strategies to improve area-wide safety for bicyclists and pedestrians.

CAPE COD COMMISSION

Previous Work:

- Barnstable County High Crash Locations, 2014
- Barnstable County Bicycle Safety Initiative (ongoing)
- Sandwich Pedestrian/Bicycle Planning: Improved Pedestrian and Bicycle Connections with the Cape Cod Canal Multi-use Path (February 2014)
- Closing the Gaps: Connecting Cape Cod's Bicycle and Pedestrian Network to Transit Routes (October/November 2013)
- Cape Cod Regional Bicycle and Pedestrian Plan Questionnaire and Questionnaire Results (October 2013)
- Current Cape Cod Bicycle and Pedestrian Projects - Revised September 2013
- Presentation: Cape Cod Rail Trail - Proposed Extension - Barnstable and Yarmouth Public Meetings (February 2013)
- Town Centers Bicycle and Pedestrian Level of Service (LOS) Report (November 2012)
- Compilation of the Cape Cod Regional Bicycle Wayfinding Design Guidelines (November 2012)
- Study: Bicycling on Woods Hole Road, Falmouth (September 2012)
- Cape Cod Bicycle & Pedestrian Planning Recommendations Report (September 2011)
- Regional Transportation Plan 2012-2035 - Chapter 5: Bicycling & Pedestrian Issues (August 2011)
- A Guide to Public Transportation and Bike Route Options on Cape Cod (brochure produced by the Cape Cod Regional Transit Authority, map prepared by the Cape Cod Commission; April 2011)
- A Plan for Improved Pedestrian and Bicycle Facilities in Harwich (January 2011)
- Bicycle Feasibility Study: Integrated Bicycle Plan for Cape Cod (National Park Service/Cape Cod National Seashore, in partnership with the Cape Cod Commission; August 2010)
- Old King's Highway Regional Historic District Bike Map (1999 brochure/map)
- Route 6A Alternate Modes Assessment (August 1995)
  Route 6A Bicycle Accommodation Study (August 1995)

Procedures:

- Research and review literature on bicycle/pedestrian safety mitigation strategies
- Participate in development of area-wide bicycle and pedestrian safety initiatives.
- Assist in the implementation of the Cape Cod Rail Trail extension
- Participate in the development of the Outer Cape Bike Plan
- Participate in the development of the Wellfleet Bike Master Plan
- Participate in the development of the Truro Bike Master Plan
- Participate in the development of the Provincetown Bike Master Plan
- Assist in the implementation of the Claire Saltonstall Bikeway realignment
- Participate in development and implementation of Barnstable County Bike Safety Initiative, focusing on seasonal workers (J-1, and underrepresented population on Cape Cod)
- Document motor vehicle-bicyclist/pedestrian crash locations
- At selected high-crash locations, prepare conceptual improvement plans

Products:

- Report identifying safety problem areas and conceptual mitigation strategies

Schedule: October 2014 to September 2015

Funding/Staffing breakdown:

Funding Source	Amount	CCC Staffing
FHWA/MassDOT	$7,500	2.5 person-weeks

CAPE COD COMMISSION

TASK 3.6 – FOLLOW-UP ON PREVIOUS TRANSPORTATION PLANNING STUDIES

Objectives: To allow for completion of and/or follow-up work on special transportation studies of prior UPWPs

Previous Work:

- Hyannis Access Study *Implementation*.
- Canal Area Data Collection and Analysis
- Route 28/Yarmouth Road Intersection
- Route 28 Corridor between Yarmouth Road and Airport Road
- Bourne Bridge Rotary Study

Products:

- Route 28 Hyannis-Centerville

Schedule: As needed

Funding/Staffing breakdown:

Funding source	Amount	CCC staffing
FHWA/MassDOT	$ 18,750	6 person-weeks

Task #4 – Other Technical Activities

ITEM CODE 41.17.00

TASK 4.1 – CCRTA COMPREHENSIVE SERVICE ASSESSMENT

Background –Massachusetts General Law requires that each regional transit authority conduct a comprehensive service assessment to ensure that each agency is operating an efficient and effective service. The plan shall include

1) a comprehensive assessment of transit services;
2) a thorough examination of the ridership trends for each line and service provided by the regional transit authority;
3) a performance analysis of existing services;
4) the development and evaluation of alternative service scenarios;
5) the development of a recommendation to better align service with local and regional demand;
6) the commonwealth's environmental policies;
7) fare rates and collection methods;
8) the region's job creation goals and employment needs; and
9) a determination of whether the regional transit authority's service is deployed in the most effective way possible to accommodate the transit needs of the region's workforce.

The development of the plan shall include public hearings in different regions of the commonwealth and the opportunity to comment on a draft report.

Task 1 – Project Initiation

The Cape Cod Commission will assist the CCRTA in developing and hosting a public participation process including periodic meetings to inform the public of the process and receive input into study. Public

CAPE COD COMMISSION

participation will also include attendance at Advisory Committee meetings.

Deliverables: Three meetings with Advisory Committee – Kick off, progress and solicitation of input, presentation of report
Three meetings with the public – Kick off, progress and solicitation of input and presentation of final report

Task 2 – Data Collection and Analysis

Cape Cod Commission staff will assist the CCRTA in the compilation and analysis of demographic, historic and existing study data to address the required components specified in the CSA.

Deliverables: Analysis to support required elements of the CSA study.

Task 3 – Report Development

Cape Cod Commission staff will assist CCRTA in writing a report which addresses the 9 elements required by the legislature for the CSA.

Deliverables: A report will be completed which will address the elements outlined for inclusion in the Comprehensive Service Assessment.

Products

The result of these efforts will be a written report which will be made available on line at www.capecodcommission.org.

Schedule and Level of Effort

The schedule for completion of this effort is March 2015. Milestones and a schedule will be coordinated with the CCRTA upon adoption of this program.

Funding Staff Break Down

Funding Source	Amount	CCC Staffing
FTA 5303	$50,000	16 Weeks
CCC	$12,500	4 Weeks

TASK 4.2 – BUZZARDS BAY COMMUTER RAIL STUDY

CAPE COD COMMISSION

Background:

At present, the nearest commuter rail service to Barnstable County is provided by the Massachusetts Bay Transportation Authority (MBTA) Kingston and Middleborough/Lakeville lines. These lines end about 20 miles north of the Cape Cod Canal. In the past, rail passenger service to Buzzards Bay and points beyond has been provided via a rail line that continues from the end of the Middleborough/Lakeville Line, but is currently used only for freight service and seasonal passenger service (Cape Flyer). U.S. census figures from the year 2000 indicate that more than 4,000 people each day were commuting to work in Boston or Cambridge from Barnstable County or from intermediate points along the rail corridor between Middleborough/Lakeville and Buzzards Bay. However, the existing commuter rail service captured less than 10% of these commuters. (Buzzards Bay Commuter Rail Extension Feasibility Study, Central Transportation Planning Staff, January 2007).

Previous efforts have been taken to examine the feasibility of reestablishing commuter rail service as far as Buzzards Bay; however, potential impacts on Buzzards Bay require more detailed consideration.

Objective:

In conjunction with the Cape Cod Regional Transit Authority (CCRTA), to prepare a study that analyzes the potential impacts of extending MBTA commuter rail service to the local community in Buzzards Bay. The study will build on previous work on extending commuter rail service to Buzzards Bay by focusing on potential impacts in these areas:

- Parking (impact on existing and need for new),
- Roadway operations in the vicinity of the stop,
- Local economy/local businesses,
- Potential for new development and its impacts, and
- Property values, tax, and assessments.

CAPE COD
COMMISSION

Previous Work:
Buzzards Bay Commuter Rail Extension Feasibility Study (Central Transportation Planning Staff, January 2007), Buzzards Bay Villages Comprehensive Transportation Plan (Wesley Ewell, June 2007)

Task 1 - Review/Summary of Previous Studies:

Staff will begin by reviewing previous studies on the topic and summarizing the findings of these studies. The summary will include existing mass transportation options, potential expansion of service, demand/ridership estimates, operational issues, and environmental and community impacts. As deemed necessary and feasible, updates to these analyses will be performed.

A summary of previous studies/findings will be compiled to serve as the parameters for the more detailed analysis of community impacts. This summary will be incorporated into the final report for this task.

Task 2 –Parking Impacts:

In discussions with local boards and officials, parking has been highlighted as a key issue surrounding the potential for extending commuter rail to Buzzards Bay. This task will examine the following:

- Ridership estimates
- Existing availability of parking in Buzzards Bay
- Potential new demand for parking
- Potential for a new parking facility in Buzzards Bay (location, how much parking, who could develop, pay for, and own a new facility)
- Potential conflicts with nearby exiting lots and on-street parking
- Implications of flood zones

Task 3 –Roadway Operational Impacts:

Impacts of additional vehicle trips on the Buzzards Bay roads are also of concern. This task will examine the following:

- Number of new trips to/from a potential new stop
- Impacts on Main Street, Route 6 Bypass, and other roadways as appropriate

- Stop location and issues related to track across Academy Drive/Massachusetts Maritime Academy

Task 4 – Economic, Business, and Financial Impacts:

Extension of commuter rail service to Buzzards Bay has the potential to significantly impact the local economy and businesses in Buzzards Bay and Bourne as a whole. This task will examine the following:

- Overall economic impacts
- Impacts on Buzzards Bay local businesses
- MBTA assessments on the Town of Bourne
- Impacts on property values
- Impacts on tax revenue
- Impacts on demand for commercial and residential development and needs for services and infrastructure

Task 5 – Other Transportation-related Community Impacts:

This task will examine any other transportation-related community impacts identified through the course of the study such as bicycle and pedestrian connections. This task will also detail any potential impacts on freight transportation and seasonal passenger service as well as any connections to findings from the Freight Study conducted under the FY2014 UPWP.

Products

Findings from tasks above will be incorporated into a final report for the study. The final report will be published and made available online at www.capecodcommission.org in addition to printed copies for interested parties.

Schedule: October 2014 to February 2015

Funding/Staffing Breakdown:

Funding Source	Amount	CCC Staffing
FTA 5303	$18,437	6 Weeks
CCC	$12,500	5.5 Weeks

CAPE COD
COMMISSION

TASK 4.3 – COORDINATED HUMAN SERVICE TRANSPORTATION PLAN, ITS, AND TRAVEL SMART INITIATIVES

Objectives: To promote the most efficient, cost-effective and environmentally sound use of our transportation system, covering all modes of transportation. To advance the development of Transportation Management Center on Cape Cod. To work with state agencies in the advancement of Intelligent Transportation System initiatives for Cape Cod, including further development of ITS for the region. To assist in the advancement of improved rail, bus, and water transportation, including passengers and freight to/from and within the Cape Cod region. To enhance the integration and connectivity of the transportation system, across and between modes, for people and freight. To promote efficient system operation and management.

Coordinated Human Service Transportation Plan Update

The Federal Coordinating Council on Access and Mobility defined the coordination of specialized transportation services as "a process through which representatives of different agencies and client groups work together to achieve any one or all of the following goals: more cost effective service delivery; increased capacity to service unmet needs; improved quality of service; and service which are more easily understood and accessed by riders." Within the existing CHSTP, three programs were coordinated through the regional plan. Changes to programs will be addressed in the update:

- Job Access and Reverse Commute (JARC) Program (Section 5316)
- New Freedoms Initiative (Section 5317)
- Transportation for Elderly Persons and Persons with Disabilities (Section 5310)

An outline of the existing CHSTP will form the basis of the update and is presented as follows:

1. Background - Coordinated Human Services Transportation Planning
2. Introduction
3. Assessment of Needs
   - 3.1. Summary of responding Agencies
   - 3.2. Significant needs
   - 3.3. Coordination Issues
   - 3.4. Coordination Needs and Opportunities
   - 3.5. Customer Issues:
4. Plan Goals and Objectives
   - 4.1. Service Improvements
     - 4.1.1. Goal 1 – provide service to address barriers and unmet needs for: journey to work, weekends and available span of service.
     - 4.1.2. Goal 2 – Encourage service opportunities in underserved areas.
     - 4.1.3. Goal 3 – Improve accessible services
   - 4.2. Service Coordination
     - 4.2.1. Goal 4 - Reduce duplication of services.
     - 4.2.2. Goal 5 – Improve service planning
   - 4.3. Program Goals and Objectives
     - 4.3.1. Job Access and Reverse Commute (JARC)
     - 4.3.2. New Freedom
5. Program Management Plan
   - 5.1. *Roles and Responsibilities*
     - 5.1.1. Cape Cod Commission responsibilities
     - 5.1.2. Subrecipients' responsibilities
     - 5.1.3. FTA responsibilities
   - 5.2. Coordination
   - 5.3. Eligible Subrecipients
   - 5.4. Local Share and Local Funding Requirements
   - 5.5. Project Selection Criteria and Method of Distributing Funds
   - 5.6. Annual Program of Projects Development and Approval Process
   - 5.7. Administration, Planning and Technical Assistance
6. Plan Summary

CAPE COD
COMMISSION

Previous Work:

- Assistance to the Cape Cod Transit Task Force and the Cape Cod Regional Transit Authority
- "Coordinated Human Service Transportation Plan for the Barnstable Urbanized Area," July 2008
- Development and continued participation in the promotion of the Flex Route bus service for the Outer Cape
- Marine Transportation Feasibility Study, 1998
- Intermodal and congestion management systems efforts
- Assistance in ITS efforts on Cape Cod. Participation in Farradyne Systems study, 1995
- Transportation web pages within www.capecodcommission.org
- Assistance to the Cape Cod Chamber of Commerce with the development of the "Smart Guide"
- Development of the Five-year and Long-range Public Transportation Plans for Cape Cod
- Development of the Public/Private Partners Program
- ITS Existing Conditions Report, 2010
- 2014 Freight Usage Analysis Study (pending)

Procedures:

- Assistance to the Cape Cod Transit Task Force and the Cape Cod Regional Transit Authority
- Assistance to the Massachusetts Department of Transportation with the development of ITS for Cape Cod – efforts to include outreach to stakeholders, attendance at meetings, review of documents and other assistance
- Development of specific ITS criteria, goals and priorities consistent with the Cape Cod Regional Transportation Plan
- Evaluation and integration of under-utilized sources of transportation information, including the Cape Cod Regional Transit Authority automated vehicle locator and the Route 132 closed loop signal system
- Advancement of 511 Traveler Information System and other real-time transportation information systems
- Support for MassRides' initiatives
- Update the "Coordinated Human Service Transportation Plan for the Barnstable Urbanized Area" to reflect MAP-21

Products: Evaluation of CCRTA transit routes; letters and memoranda as required; continued identification and development of congestion and intermodal management strategies; updated and expanded website of transportation information, reports and memoranda as required. Several possible products include:

- Traveler information via Internet
- Promotion of transportation alternatives
- ITS plans for Cape Cod Canal Area, including real-time traveler information
- ITS plans for Hyannis area
- Summary reports of updates to CMS database
- Technical memoranda reporting analyses of travel patterns and traffic condition prediction methodology
- ITS coordination with other regions
- Updated "Coordinated Human Service Transportation Plan for the Barnstable Urbanized Area"
- Assessment of effect of the recently implemented MassDOT Route 6 ITS project on Freight Operators

Schedule: Continuous throughout the year

Funding/Staffing breakdown:

Funding source	Amount	CCC staffing
FHWA/MassDOT	$ 12,500	4 person-weeks

CAPE COD COMMISSION

TASK 4.4 – OTHER TECHNICAL ASSISTANCE REQUESTS

Objectives: To provide the state, the towns, and the region with technical transportation assistance, as needed

Previous Work:

- Hyannis Parking Study, 2013
- Preparation of signal warrant analyses, review of local transportation improvement alternatives, preparation of local safety studies
- Wellfleet Fire Station access/egress recommendations, 2007
- West Chatham Route 28 Improvements, 2008
- Traffic Calming Techniques identified for local roads in Truro (2011)

Procedures: Assist towns with infrastructure improvements including pedestrian, bicycle, transit rider shelter locations, roadway reconfigurations, corridor studies, etc. Potential locations include Route 28/Bearses Way in Barnstable (capacity and safety improvements), Shank Painter Road in Provincetown (corridor improvements), and Route 28 in Harwich (pedestrian, bicycle and transit improvements).

Products: Letters, reports, memoranda, and analyses

Schedule: Continuous throughout the year

Funding/Staffing breakdown:

Funding Source	Amount	CCC staffing
FHWA/MassDOT	$ 23,125	7.5 person-weeks

Task #5 – Cape Cod Commission Transportation Planning and Regulatory Activities

TASK 5.1 – REVIEW AND COMMENT ON ENVIRONMENTAL NOTIFICATION FORMS, ENVIRONMENTAL IMPACT REPORTS, AND DEVELOPMENTS OF REGIONAL IMPACT

Objectives: The primary purpose of the CCC regulatory program is mitigation of transportation impacts in a manner that is consistent with Barnstable County's Regional Policy Plan. To ensure proper review and analysis of traffic impacts of major residential and commercial developments throughout the region. To provide such information to the CCC, MassDOT, EOEA-MEPA Unit, town officials, and other interested parties, as required. To recommend mitigation measures and work with interested parties in applying conditions to projects. To assist the Cape Cod Commission regulatory staff in the review of developments of regional impact. To assist the Massachusetts Highway Department/Public Private Development Unit (MassDOT - PPDU) in the implementation of mitigation strategies.

Previous Work: Previous work includes analysis, review, and comment on Environmental Notification Forms (ENFs), Environmental Impact Reports (EIRs), and Cape Cod Commission regulatory review.

Procedures:

- Review ENF, EIR, EIS, MIS and/or traffic analyses
- Compute trip generation estimates
- Review traffic counts on adjacent street network; conduct special traffic counts
- Perform preliminary site visit
- Compute LOS at site drive and area intersections, as necessary
- Attend MEPA site visit, if applicable

CAPE COD COMMISSION

- Discuss project with interested parties
- Identification of appropriate mitigation measures
- Review mitigation measures for compliance and consistency with the Regional Policy Plan
- Written and oral comments and testimony to the Cape Cod Commission, MassDOT District 5, MEPA, the towns, and other interested organizations as required
- Coordinate mitigation with MassDOT-PPDU

Products:

- Discussions with MEPA, MassDOT, project proponents, and town officials – provide written comments
- Testimony at DRI and other meetings as required
- Advancement of measures to mitigate traffic impacts
- Analysis and recommendation on transportation improvements necessary to mitigate impacts

Schedule: As required to meet CCC, MEPA, MassDOT, and local deadlines

Funding/Staffing breakdown: Support of this effort will be provided by the CCC. Below is the funding/staffing breakdown:

Funding Source	Amount	CCC Staffing
CCC	$ 69,703	22.5 person-weeks

CAPE COD COMMISSION

TASK 5.2 – ASSIST COMMUNITIES AND THE REGION IN THE DEVELOPMENT AND IMPLEMENTATION OF LOCAL COMPREHENSIVE PLANS (LCPS), DISTRICTS OF CRITICAL PLANNING CONCERN (DCPCS), AND ECONOMIC DEVELOPMENT IN DESIGNATED GROWTH CENTERS

Objectives: To provide technical assistance in the development and implementation of LCPs and DCPCs, Growth Incentive Zones, Economic Centers, village center planning, and other CCC funded transportation efforts

Previous work:

- Regional Policy Plan updates
- Past assistance in the development of LCPs in various Cape Cod towns

Procedures: Advisory and analytical assistance

Products: Testimony, letters, LCPs, DCPCs, and Technical Memoranda as required

Schedule: As established by the Cape Cod Commission and the Towns and legislated requirements

Funding/staffing breakdown:

Funding Source	Amount	CCC Staffing
CCC	$ 25,685	8.5 person-weeks

CAPE COD COMMISSION

TASK 5.3 – OTHER TRANSPORTATION ACTIVITIES

Objectives: To perform other transportation activities and transportation program management

Previous Work: Past transportation program management

Procedures: Flexible

Products: Viable transportation planning program

Schedule: Continuous throughout the year

Funding/Staffing breakdown:

Funding Source	Amount	CCC staffing
CCC	$ 48,701	15.5 person-weeks

CAPE COD COMMISSION

Appendix A – Additional Planning Efforts

The following projects are funded from outside sources (primarily from grants) and are shown for informational purposes.

APPENDIX A.1 – PROVINCETOWN/TRURO/WELLFLEET BICYCLE MASTER PLAN

Objective: Develop a master plan for a network of bicycle routes in Provincetown, Truro and Wellfleet and an extension of the Cape Cod Rail Trail (CCRT) from South Wellfleet. The three towns are ideally situated for constructing this network because they are adjacent to existing trails in the National Seashore and the CCRT.

Previous Work:

- Integrated Bicycle Plan for Cape Cod, 2010
- Adoption of project scope by the Towns of Provincetown and Truro
- Rail Trail Extension Study, 1988

Procedures: Per CCNS Grant Application

Budget: $231,680

Schedule: Work would be completed by October 31, 2015. (50% in FFY 2014)

CAPE COD
COMMISSION

APPENDIX A.2 – CAPE COD CANAL TRANSPORTATION STUDY

INTRODUCTION

The purpose of this study is to identify potential improvements to the transportation system surrounding the Cape Cod Canal in Bourne and Sandwich, Massachusetts, including the potential construction of new Cape Cod Canal crossings, and to initiate the environmental permitting of the identified improvements through the Massachusetts Environmental Protection Act (MEPA) with the filing of an Environmental Notification Form. Currently, the only connections between the mainland and the communities of Cape Cod are three crossings of the Cape Cod Canal: two functionally obsolete highway bridges (the Sagamore Bridge to the east and the Bourne Bridge to the west) and the moveable-span railroad bridge west of the Bourne Bridge. The bridges and the surrounding roadway network are subject to severe congestion during the summer months and other holiday weekends throughout the year. This congestion has significant impact on safety; emergency access (including evacuation routes off of Cape Cod); and overall economic activity of the Cape Cod communities.

The study will entail the development and analysis of a full range of transportation alternatives to address the identified transportation needs. The alternatives considered will include new Cape Cod Canal crossings, highway, interchange, and non-highway improvements, as well as options and design elements that improve access in all modes. The alternatives will be evaluated relative to criteria that relate to the study goals and objectives. The study will produce a final report that includes the study's analytical findings; a recommended plan of future scheduled transportation improvements (short-term, medium-term and long-term); preliminary cost estimates for these improvements; and a comprehensive implementation plan for the recommended improvements. Following completion of the final report, the selected consultant will be responsible for preparing an Environmental Notification Form of the recommended improvements in compliance with MEPA.

It is expected that this planning study will be conducted concurrently with the MassDOT projects and initiatives listed below:

- The development of traffic improvement plans for Belmont Circle (Buzzards Bay Bypass – Routes 6&28, Route 25 & Main Street) in the Town of Bourne that is currently being advanced separately by the MassDOT Highway Division District 5;
- The development of public-private partnership to construct an additional roadway crossing of the Cape Cod Canal that is currently being advanced separate by the MassDOT Special Public-Private Partnership Infrastructure Oversight Commission; and
- The replacement of the existing toll booths with All Electronic Tolling equipment along the Massachusetts Turnpike and the Tobin Bridge by the MassDOT Highway Division.

The selected consultant will be expected to support any and all coordination required between this planning study and the listed projects. This coordination will most likely involve sharing collected data and providing graphics and other study materials to the Highway Division's design consultants and/or construction firms for their use.

DESCRIPTION OF PROCUREMENT

The following sections addressing the specific tasks of the Scope of Services to be undertaken by the consultant are intended to serve as a guide for Prospective Consultants in preparing their respective technical proposals.

I. SCOPE OF SERVICES

The selected consultant team will be directed by MassDOT's Office of Transportation Planning, and the consultant's progress will be monitored by the Project Manager. The selected consultant will perform specific tasks as outlined below, with summary report, presentation materials (presumably in MS PowerPoint software), and other products as needed for each major task.

Each task will be accomplished in coordination with a public involvement plan. However, no items in this scope shall preclude the consultant from proposing modified or additional approaches or activities to accomplish

the objectives of this effort. At the same time, the selected consultant must recognize that while this scope includes most major tasks expected to be required, the consultant will be responsible for other tasks necessary to deliver the major study elements, even though not all may be explicitly called out in this scope.

Task 1 – Study Area, Goals and Objectives, Evaluation Criteria, and Public Participation

The purpose of this task is to develop the framework necessary to conduct the study. The consultant, in consultation with MassDOT and the study's Working Group, will finalize the study area and will develop goals and objectives, evaluation criteria, and a public involvement plan. Evaluation criteria will be determined based on the defined goals and objectives.

A. Study Area

The Primary Study Area is defined below, although the boundaries of the areas to be analyzed will differ by task and need. The Primary Study Area, and other relevant study areas (e.g. regional highway system connections, connectivity to destinations, etc.) will be finalized in the initial stages of the study with input from the study's Working Group. This does not preclude the consultant from proposing modified boundaries as part of their response to this procurement. The study areas should be defined to incorporate both local and regional impacts of any alternative.

The initial Primary Study Area boundary will be of sufficient size to examine the feasibility and direct impacts of any study alternatives, including a new Cape Cod Canal crossing, and will, at a minimum, include infrastructure, right-of-way, and adjacent land use within 1 mile of the Cape Cod Canal. The project will also include the evaluation of any potential impacts on other transportation facilities, including, but not limited to, connecting roadways, the CapeFLYER rail service, ferry service to Cape Cod and the islands of Martha's Vineyard and Nantucket, and the Cape Cod Canal bicycle path within the Primary Study Area.

For the evaluation and analysis of regional transportation impacts, a larger Regional Study Area will include the following routes listed below.

Evaluation of the benefits and impacts of the alternatives with respect to economic development, and land use or zoning changes will extend to this area.

- State Route 3 from Exit 2 (Route 3A – Herring Pond Road) in the Town of Plymouth to the north to the Sagamore Bridge in the Town of Bourne to the south,
- U.S. Route 6 from Memorial Circle (Cranberry Highway/Buzzards Bay Bypass & Lincoln Avenue/Main Street) in the Town of Bourne to the west to Exit 2 (Route 130 – Forestdale Road) in the Town of Sandwich to the east (via both Scenic Highway on the northern side of the Cape Cod Canal and Sandwich Road on the south side of the canal),
- State Route 28 within the Town of Bourne from Memorial Circle (Cranberry Highway/Buzzards Bay Bypass & Lincoln Avenue/Main Street) in the north to Clay Pond Road in the south,
- State Route 25 from Exit 2 (Maple Springs Road & Glen Charlie Road) in the Town of Wareham to the west to the Bourne Bridge in the Town of Bourne the south,
- Sandwich Road within the Town of Bourne from the Bourne Rotary in the west to the Cranberry Highway in the east,
- Connecting roadways,
- Major intersections along these routes, and
- Other facilities as appropriate.

Product:

- Primary Study Area definition
- Definition of any supplemental study areas
- Mapping and other supporting documentation for study areas

B. Goals and Objectives

Goals and objectives, which define the purpose of the study and its guiding principles, will be developed for this project in close coordination with the study Working Group and the public. The goals and objectives provide a "mission statement" for the study as a whole, as well as for addressing a particular issue or set of issues. The goals and objectives should shape the framework for the entire study. The Cape Cod Canal

Transportation Study's goals will serve as a base, but will not preclude modifications or additional goals and objectives from being developed. The goals and objectives should be developed so that they can also act as the project "needs and goals" as required for the future environmental permitting documents.

Product:

- Goals and Objectives

C. Evaluation Criteria

The evaluation criteria are specific considerations, or measures of effectiveness, used to assess benefits and impacts of alternatives developed during the study. The evaluation criteria will be based on the defined objectives, and must support the ultimate goals of study. Such criteria commonly include, but are not limited to, those that fall in the following categories:

- Mobility and system reliability in all major transportation modes
- Accessibility
- Safety
- Environmental effects, including air quality and greenhouse gas impacts
- Health effects, including promotion of healthy transportation options as well as discussion of other public health factors, such as air quality and noise
- Land use and economic development
- Community effects / Title VI / Environmental Justice Analysis
- Cost, including both capital and operating cost

The evaluation criteria will be used for Task 4 (alternatives analysis) of the study. The criteria should be logically related to objectives, and wherever possible, be quantitatively measured and directly derived from either previously developed information or analysis techniques used in the study. All evaluation criteria – containing both quantifiable and more subjective, qualitative measures of effectiveness – should be used to determine the best solutions for the defined goals and objectives.

Product:

- Evaluation criteria and measurement methods

D. Public Involvement Plan

The study's Public Involvement Plan will, at a minimum, have three components: 1) meetings with the study's Working Group and 2) general public informational meetings at key project milestones. In addition to legislative, state (including the Massachusetts Department of Environmental Protection, the Massachusetts Office of Coastal Zone Management, the Massachusetts Historical Commission, the Massachusetts Division of Marine Fisheries, the National Heritage and Endangered Species Program, and the Massachusetts Division of Energy Resources), and federal (including the Army Corps of Engineers which owns the Sagamore Bridge and the Bourne Bridge, and the Federal Highway Administration) representation, the Working Group will also have representation from regional and local stakeholders that include, but are not limited to, the Cape Cod Commission (CCC), the Southeastern Regional Planning and Economic Development District (SRPEDD), the Old Colony Planning Council (OCPC), the Cape Cod Canal Area Traffic Task Force, and the municipalities of Bourne, Sandwich, Plymouth and Wareham.

Working Group meetings will be scheduled at key project milestones with input from the members, and will be conducted by MassDOT Planning and the consultant. Following consultant selection, the first Working Group meeting will be scheduled to discuss the study area limits; to discuss the goals, objectives, and evaluation criteria for the project; and to give the Working Group the opportunity to comment on these elements.

MassDOT and the consultant will conduct public informational meetings at major project milestones. Public meetings will be scheduled and publicized by MassDOT Planning and the consultant. At the discretion of MassDOT Planning, the consultant will be expected to provide support for all elements of the public meetings.

The consultant shall be principally responsible for the preparation of presentation and display materials for Working Group meetings and

public informational meetings. These materials shall be prepared in advance to allow MassDOT adequate time for review and approval. At MassDOT Planning's discretion, the consultant may be required to present presentation materials in advance of the Working Group or public informational meeting.

Additionally, the consultant should be prepared to share any materials prepared as part of this study with the MassDOT Highway Division and their consultants to support the public involvement plan for the traffic improvement project for Belmont Circle (Buzzards Bay Bypass – Routes 6&28, Route 25 & Main Street). Members of the consultant team may be required to attend these meetings to provide their expertise; however, the consultant will not be responsible for providing any administrative duties in support of these meetings.

A project website will be created, maintained, and updated by MassDOT. The consultant will be responsible for providing content data for development of this website. The consultant will also be responsible for providing relevant historical documents, task deliverables, and both pre- and post-meeting materials to the MassDOT project manager for posting in a timely manner.

All elements of the Public Involvement Plan must include specific communication strategies to provide continuous and meaningful opportunities for involvement by the public throughout the study process. These strategies must provide the opportunity for the full and fair participation by all potentially affected communities, including minority and low-income populations, at this stage of the transportation decision-making process. Likewise, these strategies must include provisions to actively engage minorities and gather their responses, as well as mitigate against potential discrimination based on race, color, national origin, English proficiency, income, religious creed, ancestry, disability, age, gender, sexual orientation, military service, or gender identity or expression. The Public Involvement Plan, at a minimum, will require Spanish and Portuguese language elements and American Sign Language interpreters will be provided at all meetings. All public materials produced as part of this study, including those posted to the project website, must be in an accessible format consistent with MassDOT guidelines. Please refer to the following address for additional information on accessibility:

http://www.adobe.com/accessibility/products/acrobat/pdf/A9-accessible-pdf-from-word.pdf

Products:

- Public Involvement Plan

FINAL PRODUCTS FOR TASK 1:

1. Draft report chapter containing the following:
    - Study areas
    - Goals and objectives
    - Evaluation criteria and measurement methods
2. Public Involvement Plan

Task 2 – Existing Conditions, Future No-Build Conditions, and Issues Evaluation

Existing transportation conditions will be inventoried and evaluated, as well as anticipated future-year conditions. Existing and future land use and environmental constraints will be examined and documented. Other issues raised by the Working Group may be evaluated if feasible.

A. Existing Conditions and Data Collection

Current year (2013) transportation conditions will be analyzed for the study area facilities.

Existing data from MassDOT, the Army Corps of Engineers, the Cape Cod Commission, the Southeastern Regional Planning and Economic Development District, the Old Colony Planning Council, and the towns of Bourne, Sandwich, Plymouth and Wareham, the Cape Cod Regional Transit Authority (PVTA), Peter Pan Bus Lines, Plymouth & Brockton Street Railway, the Steamship Authority, other ferry operators, and other sources will be used to the degree feasible. This includes all available traffic volume, turning movement, and crash data; transit services, availability, and ridership; intercity passenger services, availability, and

ridership; freight rail operations, customer destinations, and freight volumes; bicycle connections and volumes; pedestrian volumes; and any other data required for a complete understanding of the transportation conditions within the study area. The study area will be analyzed for traffic volumes and levels of service, safety, transit service level of service, bicycling and pedestrian demand and environment, freight movements, ferry ridership, and other conditions as necessary. Other transportation issues as suggested in the public involvement process may be evaluated as appropriate. The consultant will utilize microsimulation software such as SYNCHRO and VISSIM as required to perform the analysis of current year transportation conditions.

Recent traffic count and classification data (including the data collected in support of the Army Corps bridge repair projects) will be used to the greatest extent possible, although historical data will be used to demonstrate trends in traffic changes. Additional traffic counts (automatic traffic recorder, turning movements, pedestrian movements, and/or bicycle movements) will be required to properly assess the conditions on the roadways and other transportation facilities in the Study Area. These counts will be undertaken by MassDOT's Traffic Data Collection section under the Highway Division.

The selected consultant will initially use the data from the MassDOT Crash Records database (developed from the Registry of Motor Vehicle crash data) to provide a preliminary review. However, the actual crash reports from both State Police and local police will need to be obtained by the selected consultant, for the three most recent years available, to ensure a thorough understanding of the existing safety conditions and future impacts to safety.

Existing land use/economic development, environmental and public health data will also be reviewed and assembled for the defined study area, from existing sources to the degree feasible. This includes the Massachusetts Department of Public Health, GIS data layers that are available from municipal or regional GIS sources (such as CCC, SRPEDD, and OCPC), and MassGIS sources.

Land use/economic development data collected may include, but are not limited to:

- Local comprehensive planning documents
- Previous conceptual planning studies

- Land-use patterns
- Zoning regulations
- Right-of-way
- Property values
- Tax revenue data
- Car and truck access
- Transit access
- Bicycle facilities
- Pedestrian facilities
- Parking
- Regional employment
- Elevation and visibility information
- Power transmission facilities
- Emergency response
- Public facilities and utilities

Environmental data collected may include, but are not limited to:

- Wetlands and water resources
- Stormwater management
- Floodplain information
- Surface geology
- Protected and recreational open space
- Areas of Critical Environmental Concern (ACECs)
- Fisheries/endangered species/wildlife
- Hazardous materials sites
- Noise levels
- Air quality/greenhouse gases
- Cultural, historical, and archaeological resources
- Federal lands

Public health data collected may include, but are not limited to:

- Hospitalization (inpatient) data for asthma, myocardial infarction, congestive heart failure, stroke, and hypertension
- Levels of pediatric and adult obesity
- Levels of pediatric and adult depression
- Levels of pediatric and adult diabetes (including Type II),
- Levels of pediatric asthma
- Injuries and fatalities related to crashes

CAPE COD COMMISSION

Recent and proposed commercial/industrial developments, major residential and mixed-use projects, and other proposed projects with significant trip generation in the study area will be identified and mapped.

Sufficient data must be collected as part of this task to identify existing social equity impacts. This includes geometric data (layout plans, lanes, curb cuts, sidewalks, crosswalks, pedestrian buttons, transit accommodations, etc.) to identify compliance with the Americans with Disabilities Act and any major breaks in accessible paths of travel, demographic and population to identify minority, low income, and limited-English proficiency populations within the study area, and data on commercial enterprises within the study area, including identification of minority-owned businesses.

MassDOT will provide available aerial photography files and any previously existing maps for the development or updating of base maps by the consultant as necessary. The general accuracy of these data will be confirmed through site visits. Final resolution/scales of photographs and base maps will be determined jointly by MassDOT and the consultant team, and will be based on available data files.

Using the above collected data, a base map will then be assembled in a GIS format for use in the future tasks. The consultant team will identify all potential land use and environmental constraints that could affect the feasibility of any alternatives developed during the study. The data will be used for other analytical purposes as well.

The consultant shall also be responsible for obtaining or collecting other data and information that are needed to execute the study scope.

Products:

- Existing traffic volumes, turning movements, levels of service, and crash data (with collision diagrams and crash rates)
- Existing transit services and ridership for study area
- Existing rail services and ridership for the study area
- Existing ferry ridership and services for the study area
- Existing freight movements and services within the study area
- Existing environmental and land-use/economic development data
- Other data and information as needed

C. Future Year Conditions

Conditions in the study area will be forecasted for the horizon year of 2035. One of the primary tools to be used for estimating future conditions is a travel demand transportation model. The consultant will develop and calibrate a travel demand model for the regional study area using data from the MassDOT statewide travel demand model and the Cape Cod Commission travel demand model to the maximum extent possible. The travel demand model must be able to account for seasonal variation in travel patterns and potential shifts in travel between highway, passenger rail, and transit modes. Transportation conditions will be forecasted for a "no-build" condition, which assumes that no alternatives are implemented. MassDOT may also engage the Boston Metropolitan Planning Organization's Central Transportation Planning Staff, through a separate contract, to provide information on demand for potential transit ridership in support of this project to ensure conformity with other planned projects. Throughout the region, only existing or planned projects that can reasonably be expected to be in place by 2035 will be included in the analysis. The consultant will work with MassDOT Planning and the Cape Cod Commission to identify appropriate assumptions for future year infrastructure and development.

Projections will be based on forecasts from the travel demand model that incorporates MPO regionally accepted growth trends and planned projects in the area. The travel demand model results will provide estimated regional and external traffic volumes, passenger rail ridership, and projected transit usage for input into the consultant's microsimulation programs (including SYNCHRO and VISSIM) to assess the future no-build (do nothing) operational conditions within the Study Area.

The consultant will coordinate closely to utilize regional model results as inputs to traffic simulations and transit services depicting a future no-build condition. This future no-build condition should also include the most current socio-economic projections (population, households, and employment), and estimates of future land use.

CAPE COD COMMISSION

Products:

- Forecasted traffic levels and conditions
- Forecasted transit ridership and services
- Forecasted passenger rail ridership and services
- Forecasted ferry ridership and services
- Forecasted freight movements and services
- Socio-economic projections
- Land use projections

D. Definition and Evaluation of Issues and Opportunities

Deficiencies and issues in the study area will be identified, quantified, and evaluated for use in subsequent tasks. Opportunities for new connections and improvements to infrastructure, access, mobility, and economic development will also be identified, quantified, and evaluated.

As part of defining transportation issues in the study area, the following elements should be considered: current and future traffic congestion, safety, environmental issues, evacuation routes, health determinants, community effects, economic development, land use, transit, bicycling, pedestrians, and other factors as appropriate. Additionally, the consultant will utilize the methods outlined in *NCHRP Report 532 – "Effective Methods for Environmental Justice Assessment"* to identify any existing transportation effects on minority or low-income populations which are disproportionate, high, and adverse. Wherever feasible, the defined issues and opportunities will be presented in graphical or map form suitable for presentation at a public informational meeting.

Product:

- Inventory and definition of issues and opportunities

E. Constraints Identification

MassDOT and the consultant team will identify a set of project constraints related to environmental impacts, engineering/design feasibility, business and residential effects, cost, transit services, and other factors as appropriate. Constraints for engineering feasibility will be based on appropriate MassDOT Highway Division guidelines as applicable.

Product:

- Inventory of project constraints

FINAL PRODUCT FOR TASK 2:

Completed draft report chapter containing the following:

- Existing traffic volumes, turning movements, levels of service, and crash data
- Existing transit services for the study area
- Existing passenger rail services for the study area
- Existing bicycling/pedestrian activity for the study area
- Existing ferry ridership and services for the study area
- Existing freight movements and services within the study area
- Existing environmental and land-use data
- Forecasted traffic levels and conditions
- Forecasted transit ridership and services
- Forecasted ferry ridership and services
- Forecasted freight movements and services
- Socio-economic projections
- Land use projections
- Inventory and definition of issues and opportunities
- Inventory of project constraints

Task 3 – Alternatives Development

Based on work completed in prior tasks, short-, medium-, and long-range alternatives will be developed in this step. The alternatives development for this study will focus on a full range of transportation alternatives to address the identified transportation needs, including new Cape Cod Canal crossing options, as well as improvements for all users along connecting roadways, other transportation modes, and adjacent land uses and attractions using a Complete Streets approach. As each Cape Cod Canal crossing alternative alignment is developed, the consultant must: provide a street network that supports all users, preserve the existing ramp connections to the local and regional roadway network, identify potential sources of revenue to support construction and operations

(public-private partnership, tolling), preserve rail access through the corridor, and improve transit, bicycle and pedestrian connections.

Additional alternatives that promote efficient system management and operation within the study area should also be included. In consultation with the Working Group, MassDOT and the consultant team will develop alternatives and refine a selection of alternatives for detailed analysis in Task 4. Where applicable, the consultant is strongly encouraged to utilize visual imaging tools (ranging from maps and graphics to the use of three-dimensional display techniques) as part of this task.

FINAL PRODUCT FOR TASK 3:

Draft report chapter containing the following:
Descriptions of short and long-range alternatives

- Maps, graphics, and other visualizations showing alternatives

Task 4 – Alternatives Analysis

The alternatives will be analyzed based on the evaluation criteria from Task 1. Any necessary mitigation related to each alternative should also be considered in the analysis.

A. Mobility and Accessibility Analysis

The consultant will analyze the impacts of alternatives on mobility in the study area. Mobility as it relates to the highway, rail, transit, bicycle and pedestrian systems should be considered. The highway system to be analyzed includes both the controlled-access highways/interchanges and local roads/intersections (including bicycle and pedestrian accommodations) in the local and regional study areas. The consultant will utilize microsimulation software such as SYNCHRO and VISSIM as required to perform the analysis of the highway system mobility. Transit services to analyze include intercity passenger rail (CapeFLYER service),

commuter bus, local bus service, shuttle services, or any other type of existing or planned service as appropriate. The consultant will coordinate closely to utilize regional model results as part of the analysis methods for evaluating appropriate highway and transit alternatives.

Product:

- Alternatives analysis for roadway network, highway operations, traffic operations, transit ridership, ferry ridership, freight movements, bicycle and pedestrian conditions

B. Safety Analysis

The consultant will analyze the traffic safety impacts in the study area for each alternative to the degree feasible, including examining the impacts on vehicular, rail, bicycle and pedestrian movements in the study area. Each of the alternative designs should refer to the crash expectations at the intersection treatments proposed according to nationally published factors.

Products:

- Alternatives analysis for traffic safety

C. Environmental Effects Analysis

The consultant will analyze the environmental impacts for each alternative to the degree feasible, including examining: wetlands, floodplains, surface geology, protected and recreational open space, ACECs, hazardous materials sites, air quality, greenhouse gas impacts, noise, cultural, historical and archaeological resources, and other constraints as necessary to fully analyze each alternative.

Product:

Alternatives analysis for environmental effects

CAPE COD COMMISSION

D. Land Use and Economic Development Analysis

The consultant will analyze land use, economic development and business impacts for each alternative to the degree feasible, including examining: right-of-way, property values, tax base, planned and potential zoning changes, planned developments (including 40B and TODs), parking, car and truck access to existing or planned parcels, freight movements, visibility, labor force impacts, impacts to minority-owned businesses, regional and local employment, and other elements as necessary to fully analyze each alternative.

Product:

- Alternatives analysis for land use and economic/business impacts including impact on freight movements

E. Community Effects/Title VI/Environmental Justice Analysis

The consultant will analyze the community impacts for each alternative to the degree feasible, including examinations of: health determinants, right-of-way, noise levels, air quality, open space, land-use patterns, property values, vehicular access, transit access, solar access, emergency response, public facilities and utilities, cultural, historic, and archeological resources, elevation and visual impact, and other constraints as necessary to fully analyze each alternative. Where applicable, the consultant team will complete conceptual level right-of-way plans for each alternative in accordance with appropriate design criteria. Plans will not include detailed design of any structural elements, but may use visual imaging software (where applicable) to portray the visual characteristics of certain alternatives that may be proposed for analysis. The consultant will also utilize the methods outlined in *NCHRP Report 532 – "Effective Methods for Environmental Justice Assessment"* to analyze the possible social equity impacts of the developed alternatives and how they may impact or benefit the minority or low-income populations that have been identified. The consultant will determine if any of the alternatives and resulting mitigation is likely to result in effects that are disproportionate, high, and adverse to these populations. If so, the consultant will quantify the location, severity, and impacted population and identify potential mitigation.

Product:

- Alternatives analysis for community effects/ environmental justice

F. Cost Analysis

Approximate construction, operations, right-of-way, and mitigation costs (including possible noise barriers) will be estimated for each alternative. The consultant will also estimate the potential revenue generated through a public-private partnership to construct and operate the proposed alternatives. Other information (project implementation scenarios, construction schedules, etc.) will be estimated to the extent possible.

Products:

- Analysis of costs associated with each alternative

FINAL PRODUCT FOR TASK 4:

Draft report chapter evaluating all alternatives based on Task 1 criteria, including:

- Mobility and system reliability in all major transportation modes
- Accessibility
- Safety
- Environmental effects, including air quality and greenhouse gas impacts
- Health effects, including promotion of healthy transportation options as well as discussion of other public health factors, such as air quality and noise
- Land use and economic development
- Community effects
- Cost, including capital and operating cost and potential revenue to support the project cost

CAPE COD COMMISSION

Task 5 – Recommendations

Recommendations may include both short-range (within five years), medium-range (between five and ten years) and long-range recommendations as a result of the analysis completed in the previous tasks. The recommendations shall also be presented in the form of an implementation plan that identifies key stakeholders, issues, milestones, regulatory and procedural requirements, and other relevant issues. The recommendations must reflect a consensus of the public attained and documented through the public participation plan. The consultant will work with the identified stakeholders to outline the steps necessary to implement the recommended improvements.

FINAL PRODUCT FOR TASK 5:

Draft report chapter on recommendations containing:

- Tables of short and long-range recommendations
- Recommendation narrative and implementation plan
- Recommendation maps, graphics, and displays

Task 6 – Final Report

A Final Report will be prepared consisting of revised versions of the report chapters developed under Tasks 2 through 5, with an introductory chapter discussing the overall project and the goals-related material developed in Task 1. The report will also include an executive summary and appendices.

The consultant will prepare a draft of the final study report in an accessible format consistent with MassDOT guidelines for review and comment by MassDOT Planning. Once the comments have been addressed, the consultant shall produce a revised draft study report that shall be distributed to the SAG and released for a 30-day public comment period. The consultant shall also hold a public meeting to present the study results and recommendations and gather any final comments.

The consultant team will be expected to deliver twenty (20) paper copies of the report to MassDOT, as well as copies for each member of the

Working Group. The final report should also be made available in accessible PDF format, with 100 compact disc copies provided to the Office of Transportation Planning. All electronic files (Word, Powerpoint, GIS Data layers, traffic analysis software, etc.) used to print the final report should also be provided to MassDOT on compact disc.

FINAL PRODUCTS FOR TASK 6:

- Draft final report
- PowerPoint document of recommendations
- Revised final report

TASK 7: Environmental Notification Form

The consultant will prepare and submit an Environmental Notification Form (ENF) for the improvements recommended in Task 5 along with a user-friendly report detailing potential impacts to relevant resource areas and a technical appendix with appropriate background analysis in compliance with the Massachusetts Environmental Protection Act (MEPA). The report and technical appendix should consist primarily of revised versions of the final report and other materials prepared in Tasks 1-6. The ENF report will, at a minimum, include the following items:

1. **Project Description** – A detailed description of the elements of the project recommendations
2. **Project Needs and Goals** – A concise summary of why the project is being pursued and what its benefits would be. The description will identify how the current proposal is consistent or compatible with previous proposals, as well as how it may have been modified and improved to address future needs.
3. **Alternatives** – A discussion of the alternatives considered (including the No-Build scenario) and their expected impacts, measures to avoid and minimize impacts, and potential mitigation measures. The Preferred Alternative may be identified if that is the outcome of the recommendations in Task 5.
4. **Public Outreach** – A discussion of the public outreach efforts conducted to-date will be provided, along with a summary of support and concerns voiced at previous meetings. The continuing public participation plan will also be described.
5. **Potential Impacts** – A discussion of the potential impacts on, at a minimum, environmental justice populations, land use,

hazardous materials release, electric and magnetic fields, alternative transportation modes, traffic, parking, noise, air quality/greenhouse gases, stormwater management, wetlands and water resources, fisheries/endangered species/wildlife, Chapter 91 compliance, federal lands, historical/archaeological resources, and open space/parkland/conservation land.

6. **Mitigation** – The report should highlight the mitigation strategies that encompass to the maximum extent practicable remedies for all the impacted areas noted above.
7. **Funding** – A discussion of the potential funding sources and potential construction timeframe.
8. **Consistency with Local and Regional Plans** – a review of the pertinent regional plans and documents (from CCC, SRPEDD, and OCPC), including its work on the upcoming Long Range Plan update, for applicability to the project. The report will also address how the project complies with state planning requirements and applicable MassDOT goals such as GreenDOT, Healthy Transportation Policy Directive, Mode Shift Goals, and the Global Warming Solutions Act.

Prior to initiation of Task 7, the consultant will consult with MassDOT staff and other regulatory stakeholders to determine if there is an opportunity to expedite the MEPA process for the recommended improvements by filing an Expanded Environmental Notification Form. Following this consultation and determination of action, the consultant will prepare a draft of the ENF form, report, and appendix in an accessible format consistent with MassDOT guidelines for review and comment by MassDOT Planning and the MassDOT Highway Division. Once the comments have been addressed, the consultant shall produce a final set of documents that shall be circulated in compliance with MEPA guidelines. The Consultant will also handle the logistics related to setting up a site visit in support of the ENF.

FINAL PRODUCTS FOR TASK 7:

- Completed ENF with all standard attachments and distribution list
- ENF report and technical appendix
- ENF site visit

Budget: $800,000 Source: MassDOT

CAPE COD COMMISSION

Federal Fiscal 2015 SPR and PL Formula Allocation

based on revised MARPA formula as of 3/18/2013

			FFY14 OA from Notice N 4520.228 per FHWA email dated 3/20/14			
			FFY14 apportionment - from FHWA email dated 3/20/14			
			$8,537,386			
MPO (PL-Funded)		**%**	**FFY14 apportionment OA 93.4**	**FHWA Funds**	**NFA Funds**	**TOTAL FFY2014**
Berkshire	YR 3	0.04610364	$367,627	*$367,627*	*$91,907*	$459,533
Boston (CTPS)	YR 3	0.34173965	$2,207,253	*$2,207,253*	*$551,813*	$2,759,067
(MAPC)	YR 3		$517,751	*$517,751*	*$129,438*	$647,188
Cape Cod	YR 3	0.06040797	$481,688	*$481,688*	*$120,422*	$602,110
Central Mass.	YR 4	0.09532586	$760,121	*$760,121*	*$190,030*	$950,151
Merrimack Valley	YR 3	0.07186451	$573,042	*$573,042*	*$143,260*	$716,302
Montachusett	YR 4	0.05463381	$435,646	*$435,646*	*$108,911*	$544,557
Northern Middlesex	YR 3	0.06704058	$534,576	*$534,576*	*$133,644*	$668,220
Old Colony	YR 4	0.07036820	$561,110	*$561,110*	*$140,278*	$701,388
Pioneer Valley	YR 3	0.09817868	$782,869	*$782,869*	*$195,717*	$978,586
Southeastern Mass.	YR 4	0.09433711	$752,236	*$752,236*	*$188,059*	$940,296
			$7,973,919			
TOTAL		*1.00000000*	***$7,973,919***	***$7,973,919***	***$1,993,480***	***$9,967,398***
RPAs (SPR-Funded)		**change from FFY2013**	**SPR FFY2014 Funds**			
Franklin	YR 3	-$19,629	$398,879	*$398,879*	*$99,720*	$498,599
Martha's Vineyard	YR 3	-$11,255	$228,721	*$228,721*	*$57,180*	$285,901
Nantucket	YR 2	-$9,574	$194,556	*$194,556*	*$48,639*	$243,195
TOTAL			***$822,156***	***$822,156***	***$205,539***	***$1,027,695***
	TOTAL (PL and SPR funded)		***$8,796,074***	***$8,796,074***	***$2,199,019***	***$10,995,093***

The recommended PL Allocation Formula as developed by the Massachusetts Association of Regional Planning Agencies and recommended by MassDOT is based upon the following three factors. These factors result in the percentages shown.

- 40% of available funds are equally divided among the 10 MPOs.
- 30% is allocated based upon each MPO's relative share of Urbanized Population.
- 30% is allocated based upon each MPO's relative share of Total Population.

CAPE COD COMMISSION

LIST OF STAFF AND ESTIMATED PERCENTAGE OF TIME ALLOCATED TO MASSDOT FUNDED (PL) TASKS IN THE 2014–2015 UPWP

Staff Name and Position	Percentage of Time
Glenn Cannon, PE, Technical Services Director	85%
Lev A. Malakhoff, Senior Transportation Engineer	85%
Steven Tupper, Technical Services Analyst	85%
Patrick Tierney, Technical Services Analyst	85%
Martha Hevenor, Planner II	50%
Project Management (Daley, Senatori)	5%
Historic (Korjeff)	5%
Land Use (Rooney, Dascombe, Korjeff)	15%
Water Resources (Cambareri, Michaud, Sherrard)	5%
GIS (Reynolds, Prahm, Detjens, Goulet, Whiteley)	20%
Legal (Wielgus, Idman)	5%
Community Outreach/Title VI (Clinton, Meus, Donahue, McGuire, Springer)	5%
Climate Change (Harper)	10%
Natural Resources/Environment (McElroy)	5%
Affordable Housing (Ruchinskas)	5%
Economic Development (Richardson, Ramachandran)	5%
Seasonal Traffic Technicians	100%

Seasonal Traffic Counting Technician(s) – approximately 10 person-weeks (100%)

FY2015 Funding Summary

		FHWA PL funds	MDOT PL (match)	FTA Sec 5303	CCC	Other	Task Total	Percent
Task 1	**Mgt & Support of the Planning Process & Certification Activities**							
1.1	Unified Planning Work Program	$11,000	$2,750				$13,750	2.0%
1.2	Transportation Improvement Program	$24,000	$6,000				$30,000	4.3%
1.3	CCJTC and MPO activities/Public Participation Program	$37,000	$9,250				$46,250	6.6%
1.4	Environmental Justice/Title 6	$30,000	$7,500				$37,500	5.4%
1.5	Regional Transportation Plan	$49,000	$12,250				$61,250	8.7%
	Total for Task 1	**$151,000**	**$37,750**				**$188,750**	**27.0%**
Task 2	**Data Collection & analysis activities**							
2.1	Traffic Counting Program	$32,000	$8,000				$40,000	5.7%
2.2	Performance Standards	$17,000	$4,250				$21,250	3.0%
2.3	Transportation database management	$34,000	$8,500				$42,500	6.1%
2.4	Pavement Management / Asset Management	$35,000	$8,750				$43,750	6.2%
2.5	Geographic Information Systems	$25,188	$6,297				$31,485	4.5%
2.6	ADA Transition Plan	$6,000	$1,500				$7,500	1.1%
	Total for Task 2	**$149,188**	**$37,297**				**$186,485**	**26.6%**
Task 3	**Short and long range planning**							
3.1	Living Streets (Rt 6 Eastham-S.Wellfleet)	$52,000	$13,000				$65,000	9.3%
3.2	Transportation Safety (Rotary Retrofit)	$30,000	$7,500				$37,500	5.4%
3.3	Falmouth Bike Plan	$25,000	$6,250				$31,250	4.5%
3.4	Climate Change Public Engagement Tools	$25,000	$6,250				$31,250	4.5%
3.5	Bicycle/Pedestrian Safety Plan	$6,000	$1,500				$7,500	1.1%
3.6	Follow up on Previous Studies	$15,000	$3,750				$18,750	2.7%
	Total for Task 3	**$153,000**	**$38,250**				**$191,250**	**27.3%**
Task 4	**Other technical activities**							
4.1	CCRTA Comprehensive Service Assessment			$50,000	$12,500		$62,500	8.9%
4.2	Buzzards Bay Commuter Rail Study			$18,437	$17,000		$35,437	5.1%
4.3	Coordinated Human Service T Plan, ITS, Travel Smart	$10,000	$2,500				$12,500	1.8%
4.4	Other Technical Assistance Requests	$18,500	$4,625				$23,125	3.3%
	Total for Task 4	**$28,500**	**$7,125**	**$68,437**	**$29,500**		**$133,562**	**19.1%**
	Subtotal FTA 5303 with CCC Match			***$97,937***				
Task 5	**CCC Planning and regulatory activities**							
5.1	Regulatory				$69,703			
5.2	Planning				$25,685			
5.3	Other transportation activities				$48,701			
	Total for Task 5				$144,089			
	Totals	**$481,688**	**$120,422**	**$68,437**	**$173,589**		**$700,047**	**100%**
Appx.	**Additional Planning Efforts***							
A.1	Provincetown/Truro/Wellfleet Bicycle Master Plan					$231,680		
A.2	Cape Cod Canal Transportation Study		$800,000					
	Total for Additional Tasks		$800,000			$231,680		

Key:

**Additional Planning Effort* s may span FFY 2014-FFY 2015 (total effort is shown in both UPWP FY2014 and UPWP FY2015 for Informational Purposes)

MDOT = Massachusetts Department of Transportation

FHWA = Federal Highway Administration

FTA = Federal Transit Administration

CCC= Cape Cod Commission

CCRTA = Cape Cod Regional Transit Authority

PL = Planning funds

Sec 5303 = Federal Transit Planning Funds

TRIP - Paul S. Sarbanes Transit in Parks Program

CAPE COD
COMMISSION

CAPE COD COMMISSION

3225 MAIN STREET • P.O. BOX 226 • BARNSTABLE, MASSACHUSETTS 02630
(508) 362-3828 • Fax (508) 362-3136 • www.capecodcommission.org